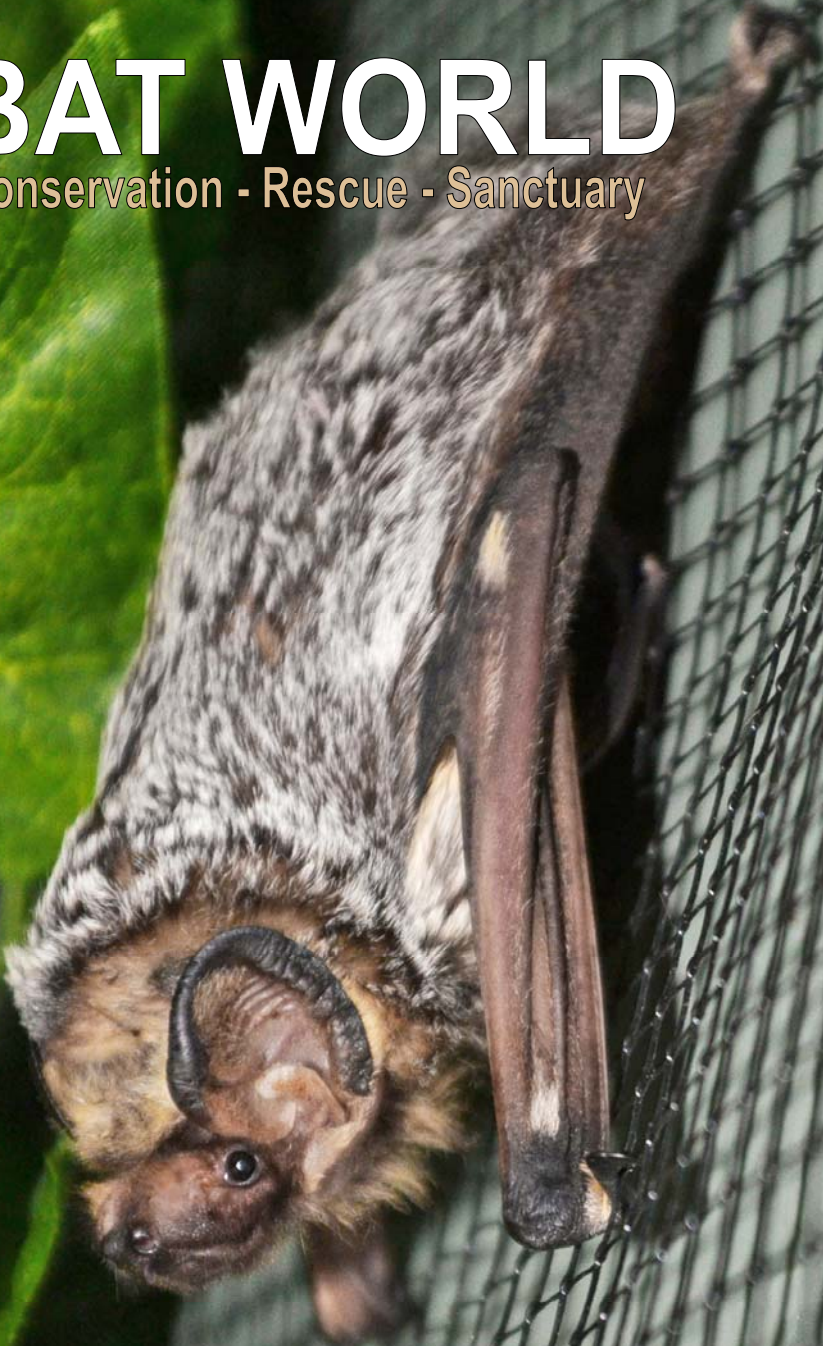


BAT WORLD

Conservation - Rescue - Sanctuary



2017 ANNUAL REPORT

Bat World

Conservation, Rescue, Sanctuary



Delilah, a beautiful hoary bat rescued by Bat World this year. Read Delilah's story on page 27. Photo by Amanda Lollar

Printed on 20% recycled paper certified by the Sustainable Forestry Initiative, using 100% vegetable based ink.

NOTE: The articles in this magazine are written by the same humans who also care for the bats. Although we try very hard a few typos always seem to slip through. Please bear with us and overlook any mistakes.

The content in this publication was created by trained, vaccinated bat care professionals in possession of all appropriate licenses or permits. No statement or photo contained in this magazine should be construed as permission or recommendation to handle bats.

VOLUME 9, 2017 Annual Report

- 3 Year-end Letter
- 4 2017 Financial Accounting
- 5 Year-End Summary
- 6 Rescues
- 29 Rescues in Other Countries
- 30 Educational Efforts
- 33 Activism in 2017
- 34 Exposing Unscrupulous Pest Control Practices
- 36 Keeping Wild Bats Safe in Summer Months
- 38 Researchers "Translate" Bat Talk
- 39 Which Bat is the Vampire?
- 41 Fundraisers
- 42 Special Acknowledgements
- 43 Bats in the Pantry Recipe
- 44 Letters
- 45 Loving Tributes
- 46 Sponsor a Bat in Need

PRINTED ANNUALLY. Want more updates than an annual printing? Sign up to receive our free Night Flight News at batworld.org



Bat World, Volume 9, 2017

All content © of Bat World Sanctuary.

Bat World is published annually by Bat World Sanctuary, a 501c3 non-profit organization. Donations allow Bat World to

continue its mission of rescue and conservation. To obtain more information about bats and how they make our world a better place please visit batworld.org.

To inquire about local rescue, make a donation, sponsor a bat, purchase merchandise or sign up for e-alerts, please contact us at:

Web: www.batworld.org
E-mail: sanctuary@batworld.org
Phone: 940-325-3404
Mail: Bat World Sanctuary, 299 High Point Rd.,
Weatherford, TX 76088

Board Officers

Founder/President
Amanda Lollar

Vice President
Dottie Hyatt

Secretary
Kate Rugroden

Treasurer
Denise Tomlinson

Advisory Board
Sean Jennett, DVM
Lynsey Rosen, DVM

Special Projects
Director
Kate Rugroden

2017 Year End Letter

Dear Bat World Sanctuary Supporters,

Nothing makes me happier than fulfilling the mission of Bat World Sanctuary, which we accomplished this year in leaps and bounds. We saved over 1,800 lives this year and rescued a sweet little fruit bat from a doomed life in the cruel exotic pet trade (see Gizmo's story on page 21). We were involved in flooding and hurricane rescues that brought positive media attention for bats from around the world.

In October of this year we received a generous grant from the Albert Schweitzer Animal Welfare Fund to purchase food for the rescued bats for one year. Thanks to all of you, we also placed 3rd in the Macy's Charity Challenge, winning a \$25,000 prize. The money we raised through that challenge will enable us to finally move forward with projects that have been on the back burner for far too long. Some of these programs include widespread education on humane handling techniques for animal control officers and researchers, increasing awareness to field biologists about the fatal effects of banding bats, and working with lawmakers to strengthen regulations governing the use of inhumane trapping and exclusion, and enacting laws that prohibit the keeping of fruit bats like Gizmo as pets.

Although Gizmo has been here almost 3 months at this writing, he is still very skittish, as if he thinks that his wonderful new world will somehow be taken away from him at any moment. However, we occasionally see glimpses that he is growing used to the tender voices directed his way, and the delicious, fresh fruit that is delivered every night. He is slowly realizing that he is safe, secure and free from any abuses he suffered in the past.

With proper care, thanks to you, Gizmo's future can be long and happy. Over 30 of the fruit bats at Bat World Sanctuary are now over the age of 20. Some were retired to us in 1996 from research, and others were rescued over the years from zoos and the pet trade. These little oldsters need arthritis medication and some need daily brushing as they have trouble grooming themselves. Because of them, we must always look into the future. We're not only concerned about funding to provide for the bats we rescue, but also funding that will help years from now, as more of our permanent residents age and need additional care.

As you read the stories of our rescues on the following pages, and the horrors that some endured at the hands of humans, please remember that your financial contributions saved their lives. We are here for every bat in need that comes our way, but we can't do it alone. Please consider sending a donation to help us provide for the bats, both young and old. Use the enclosed envelope, or contribute online through our "Donate Now" button at batworld.org. Any amount you send will be incredibly appreciated.

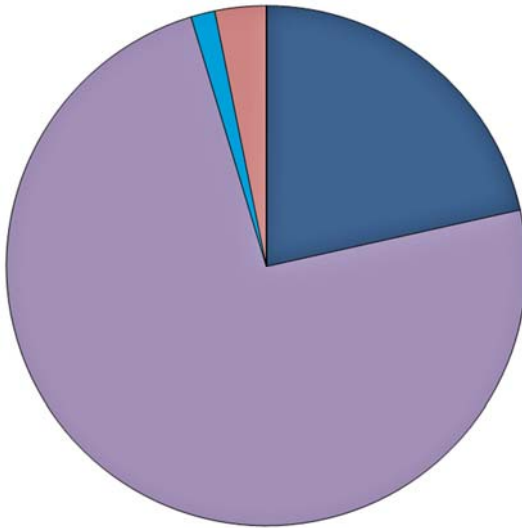
With sincere gratitude on behalf of all bats we love so much,



Amanda Lollar
Founder and President
Bat World Sanctuary

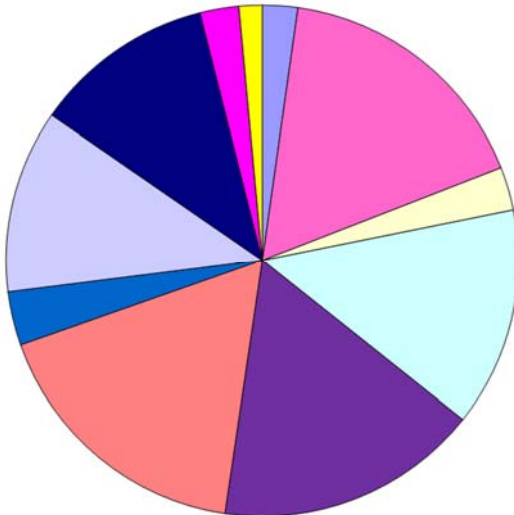
2017 Financial Accounting

Bat World 2017 Income



- Commissions from public awareness
- Public donations and contest wins
- Adopt-a-Bat sponsorships
- Workshops and educational programs

Bat World 2017 Expenses



- *Printing & website services
- Office & resale supplies, shipping
- Travel (tires, conferences)
- **Operational expenses
- ***Caretakers addition, back-up fresh water system
- Food & nutritional supplies
- Insurance
- Medical/veterinary supplies
- Employee Payroll
- Professional Fees
- Public awareness/marketing

*Books for resale, adopt-a-bat materials and educational hand-outs.

**Utilities, building maintenance, cleaning supplies, caging repair, supplies and enrichment.

*** Caretakers residence fencing and improvements, back-up fresh water supply for emergencies

2017 Year-End Summary

Income

Public awareness through sale items and books	\$60,444.90
Donations & contest wins	\$241,598.24
Adopt-a-Bat sponsorships	\$14,886.43
Educational Program fees	\$10,439.68

Expenses

Book/literature printing & website services & fees	\$4,236.31
*Professional fees	\$4,683.50
Public awareness and marketing	\$2,784.55
**Office, program & fundraising expense	\$32,104.06
Caretakers residence fencing and improvements, back-up fresh water supply for emergencies	\$31,694.46
Operational expenses	\$26,490.70
Food & nutritional supplements	\$32,937.27
Medical & veterinary	\$22,183.68
Travel expense - rescues & programs	\$5,229.62
Insurance	\$6,481.33
Employee payroll	\$21,798.16

Total income **\$327,369.25**

Total expenses **\$190,623.64**

Net rollover \$136,745.61

*Professional fees include website maintenance and security, book keeping and accounting fees.

**Office and program expenses include items needed to create our Adopt-a-Bat sponsorship packages, ink, t-shirts, and shipping charges.

Note: This accounting reflects 2017 through the third quarter; it does not reflect the entire year. Please see our Annual Report at batworld.org to view year-end IRS 990s.

2017 Rescues

Your contributions enabled us to save 1,822 orphaned, injured and displaced bats this year. Although a few of these bats were not releasable due to injuries, over 1,800 bats now fly free because you bought their food, medicine, and housing, and you provided resources critical to our rescue efforts. The bats featured in this section represent a few of the lives saved through your support. For a complete list please visit our online rescue log at batworld.org/rescue-log/

TIBBY



Kate Rugroden

Tibby is a female southern yellow bat (*Lasiurus ega*) who was found grounded with a badly broken wing after a severe storm near Galveston, Texas. A local wildlife rehabilitator provided emergency and supportive care while arrangements were made to transport Tibby to us. Unfortunately, her injury was severe and left her unable to fly but she is now completely healed. Tibby seems happy with her new life at Bat World MidCities, where she is receiving permanent sanctuary with others of her kind.

Southern yellow bats occur in the southwestern US. They eat moths, beetles and other harmful insect pests. They occasionally roost in large dead leaves like dried corn stalks and thatched roofing, although their preferred roosting sites are the dead fronds against the trunks of both wild and ornamental palm trees. If you have palm trees in your yard, please DO NOT prune them during the summer months as babies may be present. Always wait until the early spring or late fall.



This little free-tailed bat (*Tadarida brasiliensis*) was rescued from a Walmart Store in Mineral Wells, Texas in March where he flew around and around through the store and finally landed on a shelf in kitchenware where he tried to duck behind a toaster oven. Thankfully he was uninjured and in good shape so he was released into our bat castle where he could come and go on his own.



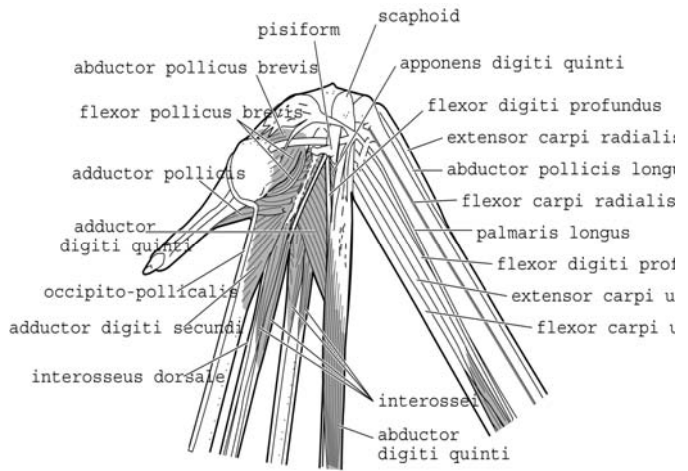
Another free-tailed bat was rescued the same day as Wally, above. This little one in the office of Antenna Products Company in Mineral Wells, Texas. He had somehow managed to get debris on his little feet and thumbs, probably from crawling under filing cabinets and other places in an attempt to find his way out. Thankfully he is uninjured and a nice weight so he could be released right away. He was set free in our bat castle with Wally, above.

Male free-tailed bats often get themselves into trouble after migrating back to the US from Mexico during months leading to spring. Their goal is to locate and set up territory to attract females before the girls migrate, which usually follows about a month after the males have arrived.



Bouncer, a free-tailed bat (*Tadarida brasiliensis*). He was found clinging to the ceiling in the lobby of a "Jump For Fun" in Southlake, Texas. Bat World volunteer Marzi drove him to our rescue center, Bat World Mid-Cities where it was discovered that he has bruising on his right wing and a damaged wrist. In this photo he had received fluids and pain medication, however, the discomfort he felt was clearly visible on his face.

Wrist injuries always render an insectivorous bat non-releasable due to the intricate structure of the wrist, as shown in the diagram. When compared to Bouncer's left wrist, you can clearly see the swelling in his right wrist in the photo. Bouncer will join the other bats at our rescue center Bat World Mid-Cities, where he can live out his life with others bats of his kind.



This little free-tailed bat was brought to us by a good Samaritan who found the bat in her yard. As seen in the left photo, when he was found he didn't have much time left. Batman (named by his rescuer) had a severely injured wing but after a month of critical care he made a full recovery as seen in the right photo. His ear and head are marked green to indicate to his caregivers that he is on antibiotics and needs to be hand-fed twice daily. Unfortunately, Batman's injury rendered him non-releasable so we will give him lifetime care with others of his kind.



Kate Rugroden

Diesel, a juvenile evening bat (*Nycticeius humeralis*), was spotted on the ground at a construction site. He was sitting on hot concrete in full sun, so a concerned worker provided shade by parking a piece of heavy equipment nearby and then continued working. After a few hours, he noted the bat still had not moved, so he used gloves to place the bat into a box. The bat was transported to Bat World MidCities where Diesel was examined. He was not injured, however, he was covered with machine shop oil (photo left). He was given two baths in Dawn dish soap and warm water and also received injections of life-saving electrolytes, rest and a few nice meals. One week later he was able to be released back to wild. The photo on the right was taken right before he took flight.

This beautiful female Seminole bat was hanging on an exterior wall of a townhouse in Dallas. The bat may have been chased from a tree by a blue jay or a crow. Thankfully she was uninjured and only needed supportive care until the weather cleared and she could be released back to the wild.



Kate Rugroden

Seminole bats have deep mahogany fur which is frosted at the tips. During winter and early spring, These bats are solitary. Both males and females roost in Spanish moss during winter and spring. Females have as many as four to five pups each summer. They rear their young in tree foliage. These bats eat large amounts of flying ants and wasps, beetles, moths and flies.



SKIMMER

Skimmer, an adult male evening bat (*Nycticeius humeralis*), was found clinging to a clump of leaves in a swimming pool in Colleyville, Texas following severe storms. He ended up with aspiration pneumonia from his ordeal and also sustained wrist abrasions from trying to climb up the slick surface of the pool walls. Thankfully, Skimmer was found in time to be saved. After several weeks of supportive care, which included antibiotics to treat pneumonia, he was able to be released back to the wild.



Thousands of small animals lose their lives in pools every summer from accidentally falling into the water. We strongly encourage everyone with a pool to place something inside that will allow small, helpless animals to find their way out. Pictured above is a "Frog Log" available through this link on Amazon.com:

<http://amzn.to/2ywnDK8>

(Note, Bat World is an Amazon.com Associate. If you purchase the Frog Log from this link, Amazon will donate 10% of your purchase price to Bat World Sanctuary.

Hawkear, a free-tailed bat (*Tadarida brasiliensis*) was rescued after we found him grounded in downtown Mineral Wells, Texas on our routine search for orphaned bats which we do daily during the summer months. His injuries were consistent with an injury from the talons of either a hawk or an owl, from which he was fortunate to escape. The tear to his ear and the injuries to his wing fingers (not pictured) render Hawkear nonreleasable so he is receiving lifetime care with others of his kind at Bat World Sanctuary.





Giblet, a free-tailed bat (*Tadarida brasiliensis*) was rescued by an individual located several hundred miles from Bat World Sanctuary. The person who rescued Giblet said she had found the bat six months previously and had been feeding her turkey baby food ever since. She was concerned because the bat “acted sick” and “would not fly.” After being assured that the caller had never handled Giblet barehanded, we convinced her to give the bat to us. Volunteer Marzi made a 10-hour round trip to bring Giblet to Bat World, where she was given several weeks of medication for liver support to combat the nutritional issues the turkey baby food diet had caused. Giblet, pictured on the right, had a strange shiny appearance for several weeks after being rescued. After learning to self-feed on mealworms the shine gradually decreased. Giblet successfully recovered and was released back to the wild after three months of care. (Note: the ears of both bats are marked green to indicate to caretakers that they must be hand fed twice daily.)

Julius, a tri-colored bat (*Perimyotis subflavus*), was found grounded near the belfry at Cathedral of Hope church in Dallas, Texas. He was uninjured, however, his fur was matted and he was very thin and dehydrated. After a week of supportive care Julius’ flight ability was assessed, which he passed with “flying colors” so he was able to be released back to the wild.



WAREHOUSE BAT



Amanda Lollar

Above: This free-tailed bat (*Tadarida brasiliensis*) found herself trapped in the office area of a warehouse over a three-day weekend last summer. After going that long without water and food she was critically dehydrated as well as emaciated, as seen in the left photo. After receiving lifesaving injections of electrolytes as well as several hand-fed meals over the next week, she was able to be released back to the wild. The photo on the right was taken before release. Another female free-tailed bat (below) was found in a water company the same weekend. She was spotted clinging to the top of a windowsill, as seen in the lower left photo. After a few days of supportive care she was also released back to the wild.

Free-tailed bats can eat between 3,000 & 5,000 insects nightly, including corn-borer moths, flying ants, flying termites and other mosquito-sized insects. They have a lifespan of 15 to 20 years in the wild and they have an intelligence level equivalent to that of dolphins. Every little life saved is critical, not just to them, but also to us.



Amanda Lollar

WATER CO. BAT

MARRIA & BABIES



Kate Rugroden

This tiny adult female tri-colored bat, named Marria, was rescued by the staff at the Courtyard by Marriott hotel in Irving, Texas. The bat had been observed clinging to a wall before severe storms swept through the area. After the storms passed, Marria did not move so she was tucked safely into a box and a call was placed to Bat World MidCities for help. The entire staff at the hotel was very concerned that Marria receive the proper care. On exam it was discovered that Marria has an injured wrist, which prevents her from ever flying again.



Kate Rugroden

After a month in captivity we learned that Marria was pregnant so she received additional nutritional supplements.

Marria gave birth to twins and subsequently raised them to adulthood. At about 10 days old, one of the tiny tots ventured out from the protective cover of Marria's wing and allowed us this rare photograph of a minuscule infant tri-colored bat. After Marria's babies were weaned and their flight skills had been honed, they were released to the wild to eat moths, flies, beetles, and ants.

Protect yourself, protect them

**NEVER
RESCUE
A BAT
BARE
HANDED!**



Find help at batworld.org



One of the 99 critically dehydrated and starving free-tailed bats rescued and released after being trapped in a storage building.

As we entered the building we discovered that it had been used for storage for over a decade. The items being stored included racks of clothes and boxes of shirts from a store closing, as well as display cabinets, Christmas decorations, filing cabinets and dozens of boxes filled with various items. We could hear bats scratching from the inside of several boxes so we immediately went to work trying to locate them. There was no electricity so we worked in the dark guided by our headlamps. It was sweltering hot inside the building as there was no air conditioning or windows we could open. Finally, after five hours of work, we had located all of the surviving bats.



The storage area where 99 bats were trapped inside



Recuperating from their ordeal

The bats were taken back to Bat World Sanctuary where they received life-saving injections of electrolytes and hydrolyzed protein, which provides energy. Within a few hours almost all the bats recovered and were released into our bat castle (photo right) where they could come and go at will.

Several days later we were back at the building, rescuing bats that had scooted behind the vents of a window unit air-conditioner (photo right) that we had previously attached screening to prevent them slipping inside and out of reach. We then rechecked the storage area and found 53 more bats that were trapped inside. We have continued to monitor the building to rescue any additional trapped bats and are in communication with the building owner on plans for a humane bat exclusion, to prevent bats from becoming trapped in the future.



Amanda Lollar

Videos of our rescues are available at <https://batworld.org/summer-rescue-videos-2017>



Amanda Lollar

WEBSTER



Webster is a young male tri-colored bat (*Perimyotis subflavus*) that was found roosting over a library door in Hurst, Texas. He was not injured but did not have enough weight to successfully hibernate through the winter. He will be provided supportive care through the winter at Bat World Mid-Cities along with three other tri-colored bats, snuggled with Webster in the photo below. All of the bats will be released in the spring of 2018.

Tricolored bats have a long hibernation period and usually select areas in the very back of caves to wait out the winter.

Tri-colored bats are among the smallest bat species in North America. Although these bats appear to have golden yellow fur, each individual hair is actually “tricolored” with a brown tip, a yellow middle and a dark base. Tricolored bats are threatened by human disturbance at hibernation and roost sites, wind energy, habitat loss, pesticides, and White Nose Syndrome, causing serious declines in wild bat populations. The Center for Biological Diversity petitioned the U.S. Fish and Wildlife Service to have the tricolored bat listed as a threatened or endangered species under the Endangered Species Act.





ORPHANED RED BATS

The above pictured orphaned red bat pup (*Lasiurus borealis*) was rescued after being attacked by a blue jay. Red bat mothers and pups roost in trees which makes them prone to attacks by both blue jays and crows. This little one fell off of her mother as she flew away safely with the rest of her babies. Fortunately, the attack was witnessed by a good Samaritan, who used a soft cloth to gather the baby up and then called us for assistance. This past summer we rescued and cared for 16 injured red bat mothers and their pups, all of whom were eventually released back to the wild. We also rescued 73 orphaned red bat pups. In the wild, red bats eat beetles, moths, ants, leafhoppers, plant hoppers, flies and other insects. Red bats swoop through a concentration of insects, such as found around street lights, and attack, on average, an insect every 30 seconds.

ORPHANED FREE-TAILS

The free-tail (*Tadarida brasiliensis*) below was one of over 100 orphaned and juvenile free-tails rescued over the summer months. Free-tailed bat mothers set up nursery colonies in the attics of vacant buildings in nearby Mineral Wells, Texas. Occasionally, a baby bat will become orphaned from the mother not returning to the roost for various reasons including being injured in a storm or becoming the victim of a predator such as an owl, hawk or human. The pups will wander off in search of their mother, and that's when we find them. We walk the downtown area of Mineral Wells every morning during maternity season just for the purpose of saving orphaned and injured bats.

The pup below was critically dehydrated when she arrived, as seen in the photo on the left. On the right, she is nursing from a foam eye-shadow applicator tip that has been removed from the wand. Warm milk is dropped onto the tip as the baby nurses. Foam tips also acts as pacifiers for the pup orphans and they often hold them in their mouths and fall asleep that way, discarding the tip after they awaken.



BENGER THE AVENGER



Amanda Lollar

fire ants, traffic and burning hot pavement. He finally ended up on a porch where he was spotted.

For the first few days we honestly didn't think Benger would survive. He was critically dehydrated, so much so that it took 5mls of fluids –more than the amount of blood contained in his tiny body- to bring him back from death's door.



Amanda Lollar

Benger, finally hydrated

He was skin and bones and vomited at almost every meal, losing all the formula and precious calories his body so desperately needed. Then burns started appearing on his toes and tail membrane, likely from the scalding hot pavement he traveled across. He lost his



Amanda Lollar

tail to burns and eventually lost one of his thumbs and a few of his toes.

It took Benger two months to completely heal. Throughout it all, he was such a hero. Despite the pain he endured, he never lost his will to survive.



Amanda Lollar

Bengener on the left, nuzzling Dory

While he was healing he made friends with Dory, another free-tailed bat who had severe injuries from being caught in a garage door.

Bengener isn't releasable because of his injuries so we will take care of him the rest of his life (15 to 20 years).



Amanda Lollar

Bengener lost the majority of his tail but it completely healed over time, as seen in the left photo. He also lost five of his toenails and one thumb nail.

His name is a combination of Roger (don't ask) and Benjamin Button, because he looked so shriveled up when he arrived. We tacked on "Avenger" because to us, he is nothing short of a tiny superhero.

To celebrate his survival, Bat World Caregiver Moriah Champagne made Bengener a tiny cape. His cape hangs on permanent display beside the staff lockers at Bat World Sanctuary, as seen in the photo on the right. If you would like to sponsor Bengener the Avenger please see the last page of this magazine.



Amanda Lollar



Left: Dory the night she arrived. Right: Dory's leg with the skin repaired and held in place with tissue adhesive.

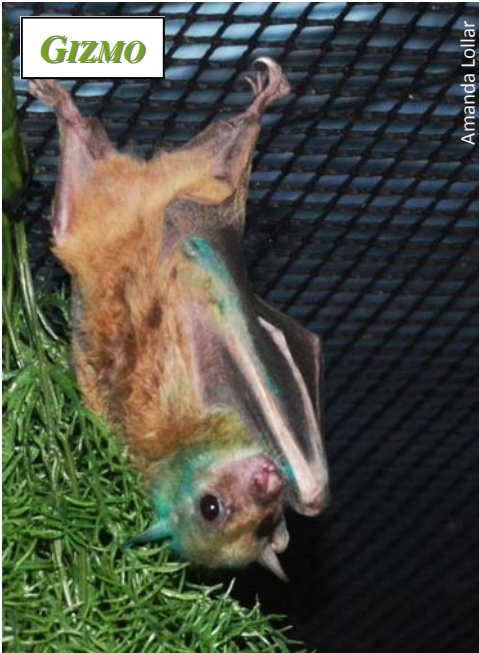
Dory came to Bat World Sanctuary late one night in August of 2017. The caller said she had fallen out of a garage door at a machine shop as the door was being opened.

Bats often make bad choices for roosting sites, garage doors being one of them. The injuries that bats suffer from being caught in garage doors as they are being opened are often too horrific to save the bat. Dory was one of the lucky ones. Her injuries included a broken wing, although worse, one leg and an area of her tail had been “degloved” meaning the skin had been peeled away, leaving the muscle beneath completely exposed.

On arrival Dory immediately received pain medication antibiotics so we could get to work putting her back together again. The degloved areas were covered in dirt and grease and had to be thoroughly cleaned several times with disinfecting solution to ensure the best chance of the injury healing. Some areas of her membrane also had to be trimmed away before her skin could be placed back into its proper position. It was a painstaking process, and Dory had a tough road that required almost three months of healing. Despite the fact that antibiotics were given, infection set in and was successfully battled twice during the months it took her to heal.



Dory, completely healed. Her ear is marked green to indicate to her caretakers that she needs to be hand fed twice daily. To watch the video of Dory's initial rescue please visit Bat World's youtube channel.



Gizmo's ear was marked green with a non-toxic temporary paint so we could keep an eye on him as he settled in.

Gizmo is an Egyptian fruit bat who was born into the cruel, exotic pet trade where fruit bats -that have a lifespan of 25 years- rarely live over a year when kept as pets. Gizmo's mother was purchased while she was pregnant, and she had Gizmo a short while later. A few months after Gizmo was born his mother passed away, leaving him alone and living in a small wire bird cage in his captor's living room, and there he languished for the next year, completely alone, and barely able stretch his wings.

Lucky for Gizmo, his captor grew tired of taking care of him and wanted to unload him to recoup his money, so he contacted a friend, Gregg Maston, to see if he wanted to purchase Gizmo. Gregg went to the internet to research how to take care of fruit bats and found our page on why bats should never be kept as pets. It then became Gregg's mission to get Gizmo to Bat World Sanctuary. Bat World volunteer, Erica, made the 8 hour round-trip to Austin, Texas to bring Gizmo to Bat World.

Because Gizmo was an unneutered male, he had to be confined to our holding enclosure until he could be neutered. We made sure, however, that he could see and hear his new family, who were located just a few feet from his enclosure. We also made sure that Gizmo was not alone on his first night. We placed Pogo, and elderly male Egyptian fruit bat, in the holding enclosure with Gizmo. The bats were placed into a bat hut together. Gizmo had not seen another bat in over a year. When Gizmo saw Pogo he immediately buried his nose into Pogo's fur, breathing in the scent of a familiar being for almost a full minute. The two happily snuggled together until the following morning when Gizmo was neutered.

When Gizmo was introduced to his new home, the resident fruit bats immediately began sniffing Gizmo all over in order to become familiar with the newcomer. After an hour Gizmo finally found his place... completely surrounded by his new family.



Gizmo is one of hundreds of bats we have rescued from the cruel, exotic pet trade, zoos and research. Gizmo's bright future is only made possible through supporters like you. Without you, Gizmo would have had no place to turn. Thank you for helping us give Gizmo the happy future he so deserves. If you would like to sponsor him and help provide for his lifetime care please see page 51.

A special Thank you to Gregg Maston for saving Gizmo's life.

RESCUING BATS FROM THE FLOOD WATERS OF HURRICANE HARVEY



On Monday, August 28th, 2017, we received word that bats were being affected by rising flood waters created in the aftermath of Hurricane Harvey in Houston, Texas.

The bats roosting under bridges were particularly affected as the wind was too strong to allow them to leave their roosts and the water rose too quickly to enable escape, as seen in the left photo.

Bats need a drop-off to take flight, and the drop off itself proved deadly as many bats ended up in the rising waters.

The bats that could take flight quickly became sopping wet from the torrential rains. A small percentage of bats took refuge in nearby parking garages and entrances to office buildings where they remained wet and without food or water for the next few days.

We immediately reached out to offer our support to several good Samaritans who were already saving bats. However, by Monday evening it became apparent that we needed to head to Houston asap to rescue as many bats as possible.



Bat World's bat care specialist Erica Quinzel, along with volunteer Jeremy Thomas, arrived in Houston after 2am and began rescuing bats before dawn the next morning. Thankfully, the water had receded enough to allow rescues. By noon Erica had saved approximately 200 free-tailed bats from their first intended stop, the AIG Parking garage, where many bats were taken after being pulled from the water. Erica created a makeshift care center in her truck and worked from the floor of the parking garage (photo right).



Jeremy Thomas



Jeremy Thomas

Each bat was warmed, hydrated with injections of electrolytes, and they received emergency food (liquid hydrolyzed protein) which provides almost immediate energy to debilitated insectivorous bats. Within a few hours of triage, most of the 200 rescued bats regained the energy needed to take flight.

After the water had receded from under the Waugh Bridge the day before, chirping could be heard from within the bat roost. Of the 200 bats rescued on the first day, 130 were able to be released back with their original colony that same night, just as their surviving roost mates were emerging.

The remaining 70 bats needed additional care and food, which Erica provided throughout the night. Sadly 22 of these bats passed away before morning, however, the remaining 48 bats recovered and were able to be released back into their original colony on the 2nd night.



One of 48 surviving bats receiving hydrolyzed protein

Sadly, there were more bats to rescue from the AIG Tower Parking Garage. However, in the middle of the rescue on the first day, a security guard from Allied Universal denied Erica and her team access to rescue the remaining bats, telling her she must leave the premises. Erica and Jeremy made repeated attempts to get back into the garage over the next three days but were not allowed back inside. We also called Allied Universal several times daily. They promised to call back and allow Erica access to the building, however, they never did. Later, a receptionist stated to Erica that they had called someone to “come deal with the problem”.

After releasing the bats one night, the exhausted team was headed to a friend's house for some much-needed rest, and on the way back the rescue truck suffered two flat tires after hitting storm debris in the road. Three other vehicles also hit the same debris. After the tires were fixed, the team headed out to continue rescuing bats.



Jeremy fixing two flat tires on the rescue truck

Word spread throughout Houston about our rescue efforts, and we began receiving dozens of calls from the Houston area about displaced bats. This information was passed on to Erica as it came in. Over the course of the next three days, Erica rescued approximately 200 additional bats from bridges, banks, trees and individuals. Erica used these opportunities to educate others on the importance of bats.



Erica, educating curious onlookers

On the final day of the rescue Erica and Jeremy were able to access the AIG parking garage with the help of a reporter from the Houstonian, but it was too late to save the remaining bats.

The total number of bats who lost their lives to the flood waters probably numbered into the tens of thousands. It will take decades for these bat colonies to recover. In the meantime, we humans will suffer the consequences from exploding insect populations and the lack of bug control these bats once provided.

Our team saved the lives of close to 400 bats and returned them to their original colonies. Every tiny life was worth the effort it took to save them, not just because bats are critical to the health of our planet and our own survival on Earth, but because bats are highly intelligent social animals with a 20-year life span. Most of all, they are individuals whose lives are as important to them as ours are to us.



Jeremy Thomas

CODY, THE BATS & THE TADPOLES



Courtney Lynn Baker

Cody and a friends working in the pouring rain to save the bats from Hurricane Irma.

On September the 9th, 2017, just as things were getting back to normal after Hurricane Harvey, we received a call from Cody LeDuc, who lived in Florida. He was in the direct path of Hurricane Irma and needed our help. He said he had two bat houses full of bats and he was very worried because there was no way the bat houses would survive the storm. Cody had been searching for help for his bats all day and we were the only “bat people” who answered the phone.

Our first concern was being able to remove the bat houses. Cody assured us that was no problem – he would do anything to save them. We asked him if he was leaving the area before the storm and he said no, he was staying put because his *(continued next page)*

house was hurricane safe. We asked him if he could bring the bats inside and he said yes, he had a hurricane-safe barn.

We instructed Cody to place a net over the bottom of the bat house while the bats were inside, then remove the houses and take them to the barn. Once the bat houses were safe inside the barn, he was to remove the screen from the bottom of the houses and provide water in shallow dishes just in case the bats woke up, explore and become thirsty. Cody called me back later and said the plan worked perfectly.



Courtney Lynn Baker



Courtney Lynn Baker

The storm lasted three days. During that time several bats exited the bat houses and flew around inside the barn, taking advantage of the shelter and fresh water that Cody had provided. After the skies cleared the bat houses were re-mounted, with Cody reporting that “not a single bat’s life was lost”. Cody saved hundreds of important little lives with his effort. Before we hung up, we thanked Cody for caring so much about the bats. He replied “No problem, we saved everything, even the tadpoles.”



Courtney Lynn Baker



Courtney Lynn Baker

Cody, putting a few stragglers back inside his bat house after it was remounted.

DELILAH



Delilah is a hoary bat that was found by a kind person in the spring of 2017. She spotted Delilah on the ground and immediately called Bat World Sanctuary for help. When Delilah arrived to us for care, it was discovered that two of her wing fingers were broken, likely from a strong storm that had passed through the area.

Delilah was very thin and dehydrated—it was apparent that she had not been able to fly and forage for insects in at least two days. After we provided Delilah with an emergency injection of fluids we gave her pain medication and set to work on her broken fingers, which were bloody and caked with dirt. During her treatment, Delilah looked at us while gently licking her injured fingers as if to say, "Thank you for helping me."

Over the next few weeks Delilah's fingers healed. While she was healing she was also learning to eat mealworms from a dish, something she truly looked forward to. Delilah would actually lick her lips in anticipation when hearing the worms being prepared for her twice-daily feedings.

Injured hoary bats do very well in an enriched captive environment. Because Delilah can no longer fly, she has a "plush" tree stump, artificial leaves and other soft enrichment items to brighten her life. And although hoary bats are solitary by nature, in captivity all rules are broken. Delilah loves to snuggle with another solitary roosting species, a Seminole bat named Sweet Pea.



Delilah licking her lips



Delilah (left) snuggling with Sweet Pea

Delilah has settled in nicely to her captive life and still eagerly looks forward to her dishes being placed below the leaves and foam rock where she hangs in comfort in her enclosure. After her meal arrives, she crawls down to where her small dishes have been placed and she devours large, juicy meal worms at her own leisure. After she finishes eating she grooms her gorgeous fur and washes her face, then climbs back to her roost to snuggle with Sweet Pea.



Kate Rugroden

Nellie, an evening bat (*Nycticeius humeralis*) was found grounded in a homeowner's driveway. She had sustained a wrist injury and was very thin and dehydrated. She was rescued by Kate Rugroden, Director of Bat World MidCities. A few weeks later it was discovered that Nellie was pregnant, and a month after that Nellie decided that a good place to give birth was in Kate's hand. Kate caught the birth on film, and it is perhaps the first time an evening bat birth has ever been recorded (see youtube video <https://youtu.be/Shv1RGOzkck>).

Nellie's babies were named Jack and Jill and in just a few weeks they were half the size of mom. In compassion to other animals of the same size, insectivorous bat pups are very large at birth and grow extremely fast. In 6 to 12 weeks, depending on the species, most bat pups are adult-sized and foraging on their own. In the mean time, bat mothers have to consume enough insects to feed herself and also produce enough milk to feed her growing pups - a tremendous feat of survival (Nellie, however, had her meals catered three times daily so she could easily keep up with this demand).

When Jack and Jill were weaned and able to survive on their own, they were released to the wild to eat spotted cucumber beetles, gnats, winged ants, flies and other harmful insects. Nellie isn't releasable because of her wrist injury so she will be cared for the remainder of her life.

Rescues in Other Countries

In 2017 we helped individuals and bat care professionals in 43 locations worldwide. Using photos and videos, we were able to identify species, share book chapters on bat care and rehabilitation published by Bat World Sanctuary, and offer medical advice to veterinarians, researchers, biologists and wildlife rehabilitators around the globe.

This year we provided book chapters on how to treat injured bats and raise orphaned bats to bat rescuers in the following International locations:

Albania, Argentina, Canada, Chile, China, Costa Rica, Croatia, Greece, Hungary, India, Indonesia, Japan, Malaysia, Mexico, Poland, South Africa, Spain and the UK.

In 2017 we provided help and information to US bat rescuers as well assisting the public with downed bats and humane bat exclusions in 32 states.

*For more details on our rescue work please see our **Rescue Log** at batworld.org where you can view the daily logs that include photographs and videos (when available).*

INTERNATIONAL RESCUE SPOTLIGHT

The following email was received from an individual in Canada. We love hearing from people who used our website to save lives!



I found a bat on top of a plywood barrel cover at work. I thought it was dead because he didn't move at all and I couldn't see any breathing. This is exactly how I found him.

The temperature was below freezing when I found him. I asked my coworkers to find a small box to put him in and I went back to my office to figure out who I could call. Not a minute later I got a text from my co-workers

saying they scooted him into the box with a stick and he slowly started moving.

My first thought was to put the box back outside and leave him to his own devices. Problem was the word got around that there was a bat at work and everyone else wanted to kill it. So I took him home, put the box (opened) in my shed, left the door slightly opened, and called our local fish & wild-life only to find out they were closed for a week.

I then got on the Internet. I'm so thankful I came across your site! I looked for links to wildlife rehab centers and found one fairly close in Edmonton Alberta! So I drove him to the rehab center with a cash donation and a couple items from their wish list.

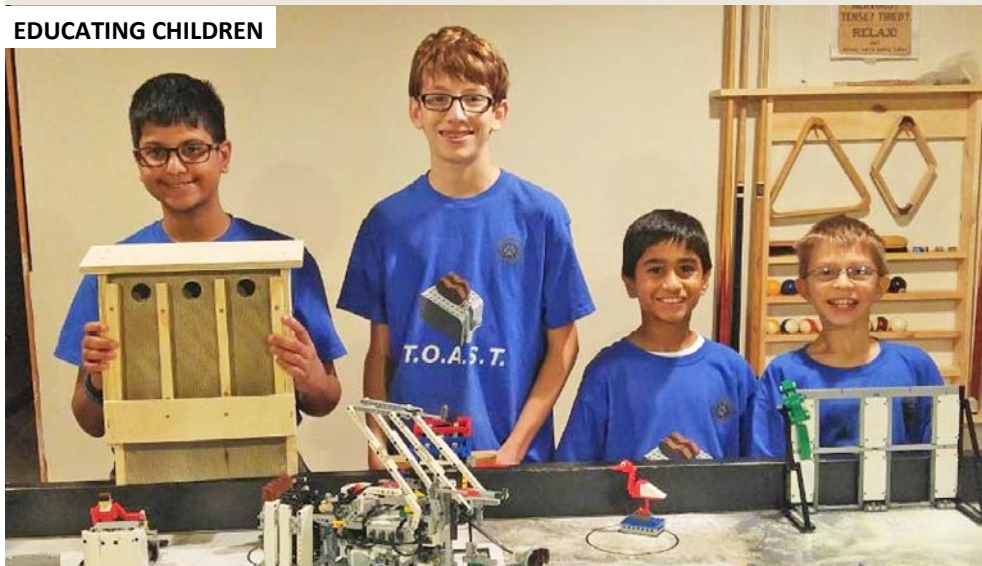
I love the work you're doing and your great website, it helped me save this little fella!



Educational Efforts

Your donations have allowed us to reach over **4 Million** people this year through educational events, online videos and posts and online magazine coverage.

EDUCATING CHILDREN



“Team TOAST” was involved in a program consisting of four students, from 4th through 8th grade, to create an innovative solution and work as a team. They chose to build bat houses and solicited our help. We provided educational materials as well as a Skype interview with questions and answers. The kids created a skit presentation using facts found in our book “The Essential Bat” and also created a brochure to hand out. Lastly, they designed and built a prototype of a bat house that they designed all by themselves.

Lectures



Bat World’s Caregiver Erica Quinzel (standing, left) and Director of Bat World MidCities, Kate Rugroden (center) provide an educational lecture for a large crowd at a Sierra Club/Fort Worth Botanical Gardens event.

Workshops



In 2017, Bat World hosted workshops for students from Texas, South Carolina, Arizona, Rhone Island, Louisiana, Oklahoma, Florida and New York. Our 25 students included veterinarians, animal control officers, and wildlife rehabilitators. Class dates for 2018 will be finalized this fall, with registration opening in the spring. Class sizes are limited to six participants in order to ensure that all students receive sufficient individualized attention during the workshops, and all students are required to provide proof of rabies pre-exposure vaccination in order to participate in lab activities. See batworld.org for details.

Internships



Bat World Sanctuary hosted two veterinary interns in 2017. Our Bat Care & Rehabilitation Internships provides an intern with a unique opportunity to acquire basic knowledge of native and non-indigenous bat species by caring for non-releasable captive fruit bats of various species as well as the hands-on care of orphaned, ill, and injured insectivorous wild bats. The program is open to students pursuing graduate degrees in zoology, wildlife biology and veterinary medicine. Pictured on the left is Taylor Driscoll, teaching a red bat to self-feed. Taylor is attending veterinary college at the University of Edinburgh in Scotland.

FAIRS



Bat World participated in the 2017 Veggie Fair in Dallas, Texas in October with over 10,000 people attending. The fair promotes healthier, kinder, more sustainable choices which lessen pain and destruction to people, animals and the planet. Our booth was managed by volunteers Erica Quinzel and Emily Klassen. Hundreds of people stopped by our booth and left educated about bats!

ADDITIONAL EDUCATIONAL EFFORTS IN 2017

- Presented a program at the Texas Unites for Animals conference
- Began teaching our Advanced Bat Rehabilitation, a workshop approved by the American Association of State Veterinary Boards for veterinarians and Licensed Veterinary Technicians. These workshops provide a unique opportunity to learn the nuances of captive bat care, as well as more advanced techniques such as fracture stabilization and dental care. The ability to offer continuing education hours for veterinary medical professionals, as well as for law enforcement officers in Texas, is a significant step forward in ensuring that orphaned, ill, and injured bats receive appropriate care in captivity, resulting in more bats being released to the wild after recovery. These classes also support our ongoing mission to educate the public about the importance of bats and the many ways in which we are positively affected by them.
- Presented two workshops at the Texas Animal Control Association conference in Abilene, Texas - 'Developing an Effective Wildlife Management Standard Operating Procedures for your Agency' and 'Bat Basics for Animal Care and Control'.
- Provided educational materials to the Hickory Knolls Discovery Center in IL
- Began working with the YMCA's Camp Carter program coordinator to help them develop curricula about bats that they can use with their summer campers. This camp serves 100,000 children every year
- Conducted a telephone interview with Flagstone Elementary in Colorado
- Supplied educational materials for a "Techno Whizzes" Save the Bats project.
- Supplied a school district in central New York with educational flyers and cards for all of the 2,200 students in their school system.

TEXAS UNITES 2017



Activism in 2017

SAVING THE BATS OF PALESTINE, TEXAS

Last year Bat World's Director of Special Projects, Kate Rugroden, met with approximately 15 residents and local officials from the City of Palestine on how best to handle the humane removal and ultimate preservation of several colonies of bats from historic buildings in the downtown Palestine area. The bats have been roosting in the older buildings for over 30 years. Even though the bats sometimes create an odor, the city wants the bats to stay in the area because of the tremendous amount of insect control they provide. Thanks to the East Texas Chapter of Master Naturalists, the first bat houses were mounted earlier this year with many more planned. We intend to work with the City of Palestine every step of the way with their commendable efforts in saving their bats.

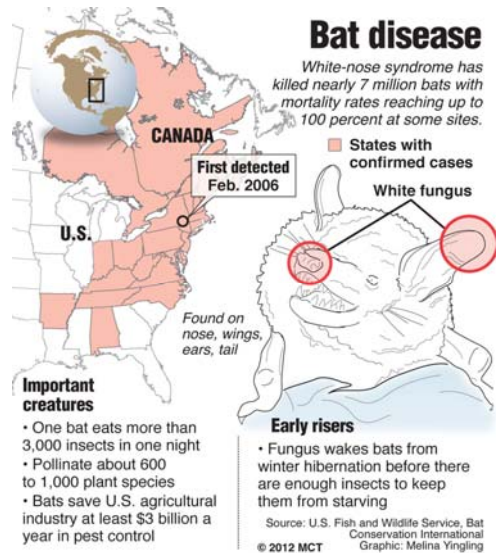


WHITE NOSE SYNDROME



National Park Service

White Nose Syndrome (WNS) and its associated fungal pathogen, *Pseudogymnoascus destructans*, have continued their deadly march across the United States and Canada. As of October 1, 2017, the fungus has been found in 33 of the 50 states, plus five Canadian provinces, and the disease has been positively confirmed in 31 of the 33 affected states, as well as in all five of the affected Canadian provinces. Researchers continue to focus their efforts on identifying biological compounds that can be used to control the fungus, without harming the other organisms that inhabit the affected caves. Additional information,



maps, and resource documents can be found at whitenosesyndrome.org.

As chair of the of the WNS Stakeholder committee, Bat World Sanctuary continues to be an active partner with Federal, State, and Tribal agencies, research institutions, and other environmental organizations in educating the public and providing information to wildlife rehabilitators who may receive affected bats.

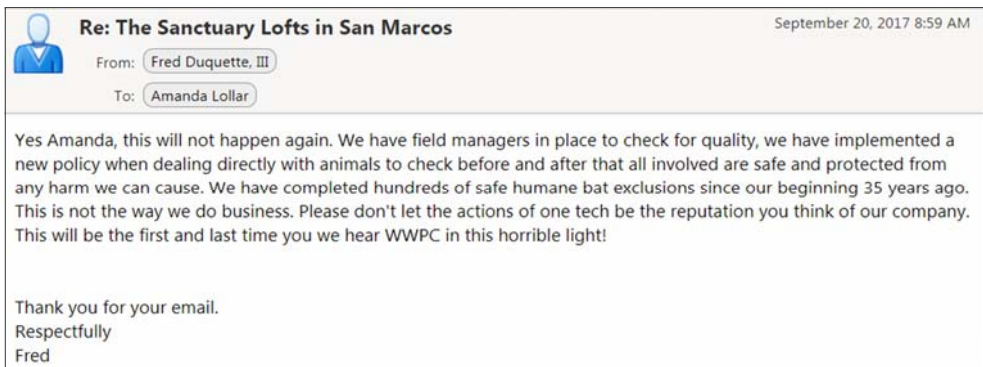
EXPOSING UNSCRUPULOUS PEST CONTROL PRACTICES

On Friday, Sept 8th, 2017 we received a call from a

concerned citizen about bats being sealed into their roosts with spray foam at the Sanctuary Lofts Apartments located in San Marcos, Texas. Tenants spotted one bats with part of his body exposed from the foam and tried to save the bat by cutting it out the section of foam where the bat was trapped. Sadly, a significant amount of foam was attached to the lower half of the bat's body which prevented him from being able to eliminate. The bat died the following day. Tenants also reported hearing more bats crying out and scratching on foam in a desperate attempt to escape.

We immediately contacted the Sanctuary Loft Apartment managers to let them know that sealing the bats in alive is animal cruelty, and that the foam should be removed immediately so the surviving bats could leave. We also provided information on humane bat exclusions. The manager informed us that the work had already been completed by Worldwide Pest Control, Inc. We also contacted the city of San Marcos as well as Texas Parks and Wildlife. Sadly, there are no laws protecting bats when they roost in public structures so nothing could be done legally to help the bats. Concerned tenants decided to open a few areas and discovered dead bats in the process. However, most of the foamed areas were too high to reach and there was a dangerous 6-story drop on the opposite side.

Although there wasn't anything we could do for the bats that had perished, we could expose this company for their horrific act. A few days after posting an article on our **Inside Bat World** blog and sharing it with over 200,000 Facebook fans, we were contacted by several news companies who ran the story. Within a week of exposing the company we received a letter from Worldwide Pest Control, along with this statement in a follow-up email.



We appreciate the fact that Worldwide Pest Control took responsibility for the work of one of their technicians. While this can't bring back the number of bats who perished under the hands of one person, it serves as a reminder to all pest control companies to regulate themselves on a regular basis. We plan to work with Texas Humane Legislation in advocating for enforceable laws that will prohibit this type of activity by pest control operators in the future.

ADDITIONAL ACTIVISIM IN 2017

- Provided treatment protocols for injured and orphaned bats to the Wildlife Rehabilitation Society of Edmonton; the Alca-Torda Bat Team in Aquitaine, France; The Wildlife Rehabilitation Center of Minnesota; the Wildlife Rehab Center of Calgary; Heaven Wildlife Rescue in Ontario; Best Friends Wild in Utah; Jivdaya Wildlife Rehabilitation Centre in India; the Bat Conservation Trust in the UK; the Animal Sanctuary of Tanzania, Africa; the Toronto Wildlife Centre; Wildlife Rehab of Lorena, Texas; Florida Wildlife Care Center; Arcadia Wildlife Foundation in Maine; the Alberta Institute for Wildlife Conservation; Another Chance Wildlife Rehabilitation in Ontario; Wildlife Rehab of New York; Peace River Wildlife Center in Florida; SPCA Wild ARC in British Columbia; Emerald Coast Wildlife Refuge in Florida; the Wildlife Rescue Center in St. Louis, Missouri and the Ohio Wildlife Center
- Helped Baby Bats & Buddies of Australia raise funds to build a release enclosure for the dozens of orphaned fruit bats they rescue annually.
- Worked with the Secretary of Health for the government Rio Grande do Sul to identify what they suspected were herpes-virus lesions on the wings of free-tailed bats. The lesions, however, were simply the egg sacs of mites which are not in any way contagious to humans. Hundreds of bats were in jeopardy from being needlessly killed over the suspicion before our diagnoses proved to be true.
- Shared our tattoo technique with the Louisiana Department of Wildlife and Fisheries which the department is considering using to replace the deadly banding method currently being used to mark wild bats.
- Shared humane marking and handling techniques with a bat biologist in Mexico who needed to temporarily mark individual bats for an ecological study.
- Provided humane handling techniques to a wildlife science/biology student at Tarleton State University
- Stopped inhumane bat removal methods from occurring and provided humane bat exclusion techniques instead to individuals and companies located in Ohio, Texas, Maine, North Carolina, West Virginia, Indiana, Oklahoma and New York.
- Worked with landowners in Hamilton County, Texas to stop a proposed wind farm due to the impact it will have on bats and other wildlife.
- Supplied photos and videos for a wildlife training course being held for bat carers in Australia
- Helped a silver-haired bat that lost weight after a tracking transponder was placed on the bat at Texas Tech University. We advised setting the bat free and acquiring a new subject as the current bat was unlikely to survive the additional temporary weight the transponder would add to her body. We also provided medical and nutritional information on bat care so future bats would become less stressed from being marked (Note: transponders fall off within a few hours of being placed on the bat and help researchers to gather information on feeding and roosting sites).
- Partnered with the Humane Educators of Texas
- Participated with the Texas A&M Institute of Renewable Natural Resources in a statewide winter bat project survey
- We provided information and recommendations for updating training materials to reflect current best practices for the National Wildlife Control Operators Association
- Exposed an Animal Control officer in Pearland, Texas who used pliers to remove a bat and then had the bat unnecessarily killed although no human or pet exposure had occurred

Keeping Wild Bats Safe in Summer Months

Summertime is busy for everyone, including bats. Baby season for our North American bats starts in May and ends in early September, depending on the species. Here are a few tips you can use to help save the lives of the battie buddies living in your own neighborhood.



Bats roosting in trees are often attacked by blue jays and crows, ending up grounded in yards where they are often found by people or pets, or worse, hit by lawn mowers. A mother bat will try to protect her babies by spreading her wings over them as seen in the photo on the left. Please check your yard for downed bats before mowing. If you find a bat in need please visit batworld.org to find a rescuer in your area.



At least 12 of our 47 US bat species use dried palm frond "skirts" as natural bat houses. Don't trim dried fronds in spring or summer to protect baby bats and birds, and try to leave some dried fronds year round so bats have a safe place to raise their pups in summer or to hibernate in winter. In addition, cosmetic trimming of the fronds can make palm trees more susceptible to heat stress and drought, so leaving some fronds helps both the trees AND bats!



Ceiling fans can break tiny arm bones. Please turn any outdoor ceiling fans OFF at night to avoid tragic accidents with bats that may fly under your porch looking for a tasty insect treat.

Please give bats a break by NOT giving them a break! You'll save a little on your electric bill while also saving little lives.

Please don't destroy my nursery!



THERE IS NO HUMANE WAY TO EXCLUDE A BAT COLONY DURING BABY SEASON. Most bats give birth to just one pup starting in late spring and summer. If you seal out a bat colony or trim down their palm frond home during the spring or summer, baby bats will be left behind to die. If you have an unwanted bat colony in your attic, ensure there's no way they can get into the home's interior but wait until the end of summer before having the colony excluded. Visit batworld.org for humane ways to evict bats at the proper time of the year.

Once this pup's little, stubby wings grow out and she learns to hunt, she will be able to eat more than 1000 mosquito-sized insects in an hour! Please give her a chance to grow up.

Use Froglogs in Pools!



If you have an outdoor pool please add a Froglog as well as a "critter skimmer". Both of these items can save countless lives every summer. Froglogs are small and compact and simply hang from the pool edge, allowing mice, frogs, lizards, turtles, and toads and frogs to escape drowning.

(Note: The image on the left has been Photoshopped to serve as an example.)

Install a pup catcher!



Every summer we receive dozens of reports of baby bats falling from bat houses. This occurs when pregnant moms move into a bat house, not understanding that the population inside the roost will double when their babies are born. The pups grow quickly so it doesn't take long before the bat house is over-crowded and overheated. Installing a pup catcher is very easy to construct and costs very little. It is a simple net that catches fallen pups and allows them to climb back inside. Pup catchers can even be made to fit inside barns, under the eaves of homes and any other area where babies may be falling. If you have a bat house with bats, or have noticed pups falling from another type of roost, please install a pup catcher right away. See batworld.org for free instructions.

Special thanks to Cindy Myers for the use of her graphics and text!

Researchers "Translate" Bat Talk

By Mihai Andrei—Reprinted from *zmescience.com*



A new algorithm has analyzed fruit bat squeaks, and it came to the conclusion that they discuss with each other much like you and I do. The new study was conducted by Prof. Yossi Yovel of the Department of Zoology at the Tel Aviv University in Israel. He recorded the sounds emitted by 22 Egyptian fruit bats over the course of 75 days, creating a database of 15,000 vocalizations.

“When you enter a bat cave, you hear a lot of ‘gibberish,’ a cacophony of aggressive bat noise — but is this merely ‘shouting’ or is there information amid the noise?” said Prof. Yovel. “Previous research presumed that most bat communication was based on screaming and shouting. We wanted to know how much information was actually conveyed — and we wanted to see if we could, in fact, extract that information.”

The first thing they found was that the sounds aren’t random — it isn’t just a mixed up cacophony, there are discernible patterns for bat sound making. Researchers managed to group about 60% of all sounds into four categories, the rest of the 40% being yet unclear. Most of the 60% are arguments.

Frequently, bats argue about food — this was the most common type of sounds. But bats also argue about their position in the sleeping cluster. Another type of argument is bats protesting that other bats got too close to them. Lastly, the fourth category represented males making unwanted mating advances — nature’s love spat. The success of the study surprised even the researchers themselves, who weren’t expecting to come across such a trove of valuable information. The researchers emphasized that aside from humans, only a handful of other species are known to address individuals rather than making broad communication sounds.

“We have found that bats fight over sleeping positions, over mating, over food or just for the sake of fighting. To our surprise, we were able to differentiate between all of these contexts in complete darkness, and we are confident bats themselves are able to identify even more information and with greater accuracy — they are, after all, an extremely social species that live with the same neighbors for dozens of years.”

We found, in our research, that bat calls contain information about the identities of the caller and the addressee, which implies that there is a recognition factor. We were also able to discern the purpose and the context of the conversation, as well as the possible outcome of the ‘discussion.’” Continuing this study, they now want to figure out if this communication is something instinctive and bats are born with it, or if it is learned in a cultural fashion.

Journal Reference: Yosef Prat, Mor Taub, Yossi Yovel. Everyday bat vocalizations contain information about emitter, addressee, context, and behavior. *Scientific Reports*, 2016; 6: 39419 DOI: 10.1038/srep39419

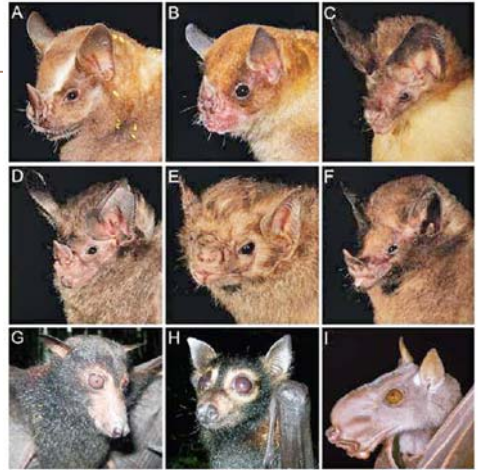
Which Bat is the Vampire?

By Truth Muller, Contributing Author for Bat World

On June 6, 2017, NPR published a YouTube Video entitled “Should We Wipe Out Vampire Bats.” The video says that in Latin America, “Vampire bats are ruining livelihoods and lives. They prey on pigs, on calves, on children, and sometimes, sick bats carry rabies in their saliva.” Outbreaks of rabies are killing dozens of people and costing the region over 30 million dollars in dying livestock every year. Due to this, the ranchers of the region are petitioning their governments to exterminate the entire species. The video’s intention was to investigate the validity of this idea. However, the video does not answer questions, it raises them – and it also raises fears.

First of all, I cannot stress this point enough: Less than one tenth of 1% of all bats in the entire world ever get rabies. You’d have a better chance of getting rabies from a stray dog. So to suggest we exterminate all vampire bats because perhaps one in one thousand carry rabies is sickening. By this same logic, does that mean we should exterminate all domesticated dogs, cats, raccoons, and foxes, too, on the chance they may have rabies? All are potential carriers of the disease. There is also a serious assumption made here: that the bats are in any condition to feed once they contract rabies. Unlike a “mad dog”, a bat sick with rabies becomes not aggressive but sluggish, stops flying and dies within days of contracting the disease.

Tragically, attempting to exterminate bats is nothing new, and has been practiced in Latin America since the 1960’s. As stated in the NPR video, vampire bats are currently captured and poisoned by “spreading a toxic paste on the back of a bat, and when the bat returns to its roost the poison spreads through the whole colony”. The video also says that this is not working, and



may actually increase the spread of rabies (how this can happen is not explained). According to *The Secret Lives of Bats* (Tuttle, Merlin. Houghton Mifflin Harcourt : NY, 2015) another common practice, not mentioned in the video, is the use of flamethrowers to exterminate bats, and the dynamiting of bat caves. Beyond ethics, the huge problem here is that the exterminators have little to no formal training in identifying a Vampire Bat. In Latin America, the colloquial word for bat translates to “vampire”. As only three of the 1,339 species of bats are actually vampires, there are hundreds of species, including insect and fruit-eating bats, who also die during these campaigns. To start an “exterminate-to-extinction” campaign in one of the most biodiverse bat habitats on Earth could spell disaster for its ecosystem, and human health. To kill any amount of insect eating bats, many of which look to the untrained eye very similar to a vampire (small and brown) would be potentially catastrophic, due to the fact that the home of the Common Vampire is also the home of the Zika Virus. The host of the video also states that “as far as we know, [Vampire Bats] don’t play any important role. The jungle would be just fine without them”. That is an extremely irresponsible statement, because “as far as we know” is not far at all.

(Continued next page)

We have no idea what purpose these bats serve, but they would have gone extinct millions of years ago, or never evolved at all, if they did not serve some purpose.

So what's the solution? The only two that the video offers are exterminating all the vampires, or a "hugely expensive vaccination program – you'd have to [vaccinate] all the people, cows, pigs, even the bats". Another mistake: You would not need to vaccinate the bats – that would be akin to vaccinating mosquitoes for malaria, unnecessary and impractical. There is a third solution, one which virtually stopped malaria in its tracks in the same country the video was filmed: Panama. During the construction of the Panama Canal, mosquito netting was instrumental in saving lives and staving off the deadly disease. Instead of asking the government to kill things, why not petition for mosquito netting or screens on the rancher's homes? A bat cannot bite what it cannot reach. Lastly, besides an interview with a few of the ranchers, no scientific proof is offered ANYWHERE in the video or the accompanying article, connecting vampires and these rabies outbreaks. Where is the proof? The ranchers stated only that vampires were biting their animals (and in some cases, some children who "lived over by the cows for a while"), but not

that anyone or anything had died or been infected on their ranch.

The video never answers its own question, "Should We Wipe Out Vampire Bats?". Based on the erroneous statements, factual holes and lack of hard evidence throughout the video, Buddies for Bats has to say, "no". Before we start killing off an entire species, let's get all our facts straight, and think hard on the role these animals do play in their ecosystem, and our planet's.

So which bat above is the vampire bat?

Answer: E

Here are the other species pictured:

A: Great Fruit-eating Bat (*Artibeus lituratus*) B: Little Yellow-shouldered Bat (*Sturnira lilium*) C: Common Big-eared Bat (*Micronycteris microtis*) D: Stripe-headed Round-eared Bat (*Tonatia saurophila*) E: White-winged Vampire Bat (*Diaemus youngi*) F: Thomas's Nectar Bat (*Hsunnycteris thomasi*) G: Black Flying Fox (*Pteropus alecto*) H: Spectacled Flying Fox (*Pteropus conspicillatus*) and I: Hammer-headed Fruit Bat (*Hypsignathus monstrosus*).
Photo Credits: A and B are courtesy of RLM Novaes (Oswaldo Cruz Foundation, Brazil), C-F are courtesy of A Pol (Federal Rural University of Rio de Janeiro, Brazil), G and H are courtesy of A Breed (Animal and Plant Health Agency, Addlestone, Surrey, United Kingdom) and I is courtesy of Jakob Fahr (Max Planck Institute for Ornithology, Germany). Photographers are the copyright holders of the images.



When you register a credit/debit card with CaringCent, you can donate your checkout counter change from your purchases to Bat World Sanctuary! CaringCent will automatically round your purchase to the nearest dollar, with the difference going to save bats. You can cap the change given monthly to any amount over \$10. It's the modern day version of dropping your coins in the change jar at the checkout counter! Visit caringcent.com/batworld/ to sign up. If you don't see your bank listed as available to participate please put in a request that it be added.

Fundraisers



Thanks to the wonderful people who supported us on the Macy's Charity Challenge held in July through August of 2017, we won a 3rd place prize of \$25,000! Several bonus challenges were offered through the contest and we also won over \$6,000 in bonus prizes! The challenge was based on the amount of donations a charity received. The money we raised through donations will not only help with urgent rescues but is being used to move forward with projects that are critically needed - projects that we have not yet had the funding to implement. This includes widespread education on humane handling techniques for animal for animal control officers and researchers, and working with lawmakers to enact laws that prohibit the keeping of fruit bats as pets.

The prize money has also enabled us to move forward with developing a critically needed, noninvasive marking method to

replace the banding of microbats, which almost always proves fatal.

Bats have been banded for decades, primarily to study migratory movements. Concerns regarding injury due to banding were cited as early as 1955. Serious damage including fractures, swelling of the wrist and infection has been repeatedly noted. Despite this fact, In the late 1950s and 60s, over 430,000 free-tailed bats were banded. Very few were ever recovered. Despite all this, the practice continues to the present day with thousands of wild bats being banded every year. The survival rates of these bats range from 0.19 to 0.75.

Our "Battoo" project involves tattooing the ear of a bat with a hand-held device being developed for us by volunteer engineer Larry Crittenden on a 3D Printer that we purchased for this project. We hope to have our Battoo ready for testing in the field in 2018. For more information on our tattoo initiative see our blog "A Bitter sweet Rescue" on *Inside Bat World* at batworld.org.

amazonsmile
You shop. Amazon gives.

Shop at Amazon.com and Bat World Sanctuary gets a percentage donation directly from Amazon!

1. Go to smile.amazon.com
2. Select your charity
3. SHOP!



Please sign up and choose Bat World as your charity at smile.amazon.com! It costs you nothing and bats reap the benefits. Amazonsmile deposits quarterly donations directly to our account. The last amount we received from amazonsmile was over \$1,400!



Daily clicks for Bat World helps us save orphans and costs you nothing.
Please sign up at
Shopforyourcause.com/click-to-donate

Special Acknowledgements

ALBERT SCHWEITZER ANIMAL WELFARE FUND

In October of 2017 Bat World Sanctuary received a generous grant of \$41,000 to cover our expenses for food and nutritional supplements for the bats for an entire year!

The Albert Schweitzer Animal Welfare Fund was named for the famed scientist and humanitarian Albert Schweitzer. Born in 1875, Schweitzer was sensitive to the suffering of all living things even as a child. He spent his entire life working tirelessly to promote his mission of serving humanity. Dr Schweitzer was recognized with a Nobel Peace Prize in 1952. He died in 1965 at the age of 90.

A SPECIAL THANK YOU TO THE FOLLOWING MACY'S CHARITY DONORS WHO HELPED US WIN!

Daniel Logan and Gladys Cofrin, Laurel Rohrer, M.K. Upham, Ariyana St. Jennings & Jan, Maureen Obrien, Anne Ruddy, Vera Blevins, Jama Holmes, Gail Gallo, Margaret Brandt, Anne Littlefield, Randy Turner, Steve Robards, Mary Collins, Martin & Kate Rugroden, John & Dottie Hyatt and the remaining wonderful 364 donors who helped us secure 3rd place!

DSL LEAD THE WAY

Thanks to Bat World volunteer and Dallas Shoe Lovers employee Marion Orso, her company's *Lead the Way* program generously donated \$2500 to Bat World Sanctuary!

Bat World Sanctuary was the recipient of a \$10,000 grant from LUSH, a company that donated 100% of the retail price of their "Charity Pot" body lotion. So far, over 600 grassroots nonprofits and charitable organizations have benefitted from their program.

Bat World Sanctuary was chosen by Lush staff Janelle Kinney and Kelli Hallmark (pictured left), who volunteered for a day at Bat World Sanctuary.

Seattle Community Foundation

A special thank you to the generous donor who sent an anonymous contribution to Bat World through the Seattle Community Foundation!

LUSH "CHARITY POT" GRANT



2017 VOLUNTEER OF THE YEAR!



Marzi Pecan has been volunteering with us since 2014, and is a true bat hero. She provides transport for bats that need to come to Bat World for care, often spending 10-12 hours round trip to ensure that an orphaned, ill, or injured bat makes its way safely to Bat World. During baby season, we rely on Marzi to pick up grounded mothers with pups, orphans, juveniles, and injured adults - sometimes making two or three trips in a day. In addition, she is a passionate advocate for bats, and wherever her travels take her, she is ready to educate everyone she meets about the importance of bats. Thank you so much, Marzi!

Bats in Your Pantry!

The bat symbol represents ingredients either brought to you by bats or protected by bats.

Acorn Cherry Squash

- 🦇 1 acorn or pepper squash, slit several times with a knife
- 🦇 2 cups vegetable stock
- 🦇 ½ cup long grain white rice
- 🦇 ½ cup wild rice
- 🦇 1 cup diced carrots
- 🦇 1 cup canned crushed pineapple
- 🦇 ½ cup raisins or dried cherries
- 🦇 2 Tbsp orange juice concentrate
- 🦇 1½ Tbsp molasses
- 🦇 1 Tbsp packed brown sugar
- 🦇 ½ tsp cinnamon
- 🦇 Pecans (optional)



Microwave squash on High for 10 minutes or until tender, and then cool. Cut into half lengthwise and scoop out cooked flesh. (If desired keep shells to use later.) Chop flesh. Meanwhile, in a saucepan over medium-high heat, combine stock, white rice and wild rice and bring to a boil. Reduce heat to medium-low. Cook, covered for 20 minutes. Add carrots and cook, covered for 10 minutes or until rice and carrots are tender and liquid is absorbed. (Wild rice will be crunchy). Add squash, pineapple, raisins, orange juice concentrate, molasses, brown sugar and cinnamon. Cook, uncovered and stirring often for 5 minutes or until heated through. Spoon squash mixture into shell reserved as a serving platter. Top with pecans if desired.

- **Squash:** (all varieties, including butternut, spaghetti, zucchini and acorn): Pests that feed on squash include cutworms, flea beetles, corn earworm moths and cinch bugs. Insectivorous bats love to squash these bugs between their teeth.
- **Vegetable stock:** Some of the most common vegetables used in vegetable stock are those harmed by cutworm moths, grasshoppers, sunflower moths, cabbage seed weevils, brassica pod midges and pollen beetles. It's a good thing bats have large appetites!
- **Rice:** Bats don't need chopsticks to eat the crickets, stemborers, leafhoppers and caseworm moths that damage our rice fields.
- **Carrots:** "What's up doc?" Unless bats are around, carrot eating root flies, rust flies, carrot beetles, leafhoppers, armyworms.
- **Raisins and cherries:** Luckily for us, bats heard it through the grapevine to keep the Japanese beetles, grape berry moths, fruit flies, tussock moths and leafhoppers that eat grapes (raisins) and cherries in check.
- **Orange juice** (all citrus fruits): Bats beat the pulp out of the katydids, mealybugs, whiteflies, rosebeetles, and leafhoppers who love to munch on the vines of our favorite citrus fruits.
- **Pecans:** The shuckworm moth, walnut datana moth, and the twig girder love to munch on our precious pecans. Bats find these bugs just as delicious as we find pecans.

Letters

Sharing a few of the many messages we received in 2017. Receiving notes like these means more to us than we can fully express! We hope you enjoy reading them.

I have to tell you a story... I've always been terrified (TERRIFIED) of bats. I started following this page when I saw a pic of a sweet little face and thought it was a rat. Clicking in, I saw what it really was, and almost clicked out. But then I thought "it's actually kinda cute... maybe I should follow this page and see if I can desensitize myself". Fast forward to a weekend and I'm at a campground at dusk. I'm walking back to the campfire when a bat swoops down in front of my face. My first thought: Hope you got that mosquito. My second thought: Whoohoo - I didn't run screaming!!!

I just wanted to express to all of you at Bat World Sanctuary how wonderful your work is. You have inspired my child Abigail, who is only 6, to learn all about these amazing creatures and share her knowledge with everyone. She became interested in bats more than 2 years ago and her love for them remains strong. When she grows up, Abigail wants to be a bat scientist and help save them. I'm sure that you have days that break your heart but please know that you have inspired my little girl and me and we will do our best to reach more people and let them know what they can do to help. Keep fighting for these precious animals!

Regarding your Carol Noon Award for Sanctuary Excellence... "for her leadership in supporting the welfare of bats as a caregiver, educator and advocate" These are not just words. This is a concentrated truth. Can't explain how grateful and amazed I'm for her warm support and hours and hours spent to help a small human with a strange name with her bats in Bulgaria... Thank you, Amanda and Bat World Sanctuary!

You do great work. As an animal control director we have always been leery of bats because generally all we see are the sick ones that are rabid. Since I have learned more about these sweet little creatures I have become a hard-core advocate! Thank you for all you do.

I would just like to say thank you for all that you do for the little fury baby bats and all the others. You guys are amazing and I wish I was there and not here in south Africa, I would be there helping you every spare minute of every waking moment of my life...

I am so happy to have heard about your Sanctuary. You were on the 95.1 show with Brother Wease in Rochester NY this week and I always am looking at the Camera's. I was a person who really felt bats were creepy and now my Heart has grown. I absolutely adore watching them. Thank You for your knowledge and spreading the word.

Thank you for the admirable work you do to save bats. It is truly wonderful. I just adopted Bootsanna. I thought I might share an anecdote as to why she, of all the precious bats you care for, struck a chord with me. I've been a diabetic for decades. Several years ago I lost the toes on my left foot and, soon after, had my right leg amputated below the knee. I now wear a prosthesis, but during the couple of years between the two surgeries I also had to wear special boots and shoes much like Bootsanna (and in fact still sleep with one on my left foot). As you can imagine, when I read her story it touched me and in fact made me tear up. Thank you for providing me with an opportunity to help care for her.

I found a link to your website after a friend posted it on Facebook and wanted you to know that I am making a donation which I feel just barely covers the cost of the entertainment that I've gotten from reading your writing. What a wonderful website!



Loving Tributes

In Loving Memory of Dorothy Everett. ~Jane Ann Day, Cliff & Linda Brown & Randy Turner

In Memory of Gregor Mszar, a wonderful supporter of all animals ~Bat World Sanctuary

In loving memory of my sister, Lisa Jo Randgaard, who had a soft spot in her heart for vulnerable animals, including precious bats. ~ Linda Antonioli

In Loving Memory of Isis and Sharon. ~Carol Hunterton

In Memory of Charles J. Poynter. ~ Linda Poynte

In Loving Memory of Janet Kemp. ~ Laura Gizinski , Matthew Kemp & Lester Kemp

In Memory of the Green Space bats. ~ Clarinda Karpov

In Memory of my mother, Lois Knoop. ~ Janel Hafer

In Memory of Chloe. ~ Frederick F. Sears, II

In Memory of my Nick Dahm. ~ Lisa Dahm

In Memory of Nicholas Alvarado. ~Jacquelyn Wheeler

In Memory of friend George. ~ Phil McWilliams

In Memory of my little "bat boys" Cecil and Cosmo, the Devon Rex cats. ~ Leslie Cully

In Memory of my Cat, Mandy. ~Graham Hyatt

In Memory of my son, Jason. He loved all creatures, both great and small. ~ Sherri Weitnauer

In Memory of my late husband, Ted Farmer - caver and bat lover. ~Nancy Hightower

In Memory of Edmund Baum. Sharon Agresta Siekerman

In Memory of Bob Berry and Dixie Pierson. ~Patricia Brown

In Memory of Mr. Impley. ~Bret Corum

In Memory of Laria the flying-fox who was hit by a car and I had to euthanize. ~ Meg Churches

In Memory of cave myotis, Ganymede and Sizzle the schipperke. ~Sharon Warner

In Memory of Chris Forzano. ~Barbara Zimmerman

In Memory of Morgan Alonso Pine. ~Vivian Pine

**Regrettably, we could not fit every 2017 Memorial on this page.
Please see batworld.org/2017-loving-tributes/ for the complete list.**

Sponsor a bat in need for \$35!



Your sponsorship package includes:

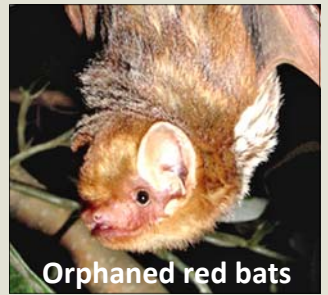
- An adoption certificate listing you as the official sponsor.
- The personal background of your sponsored bat.
- The natural history of the species.
- A matted photograph of your bat, suitable for framing.
- A graphic that represents the actual size of your bat.
- A one-year online membership to BWS that includes *BAT WORLD'S* magazine.
- A personalized message for a gift Adopt-a-Bat. Our standard gift card message reads: This "Adopt-a-Bat" sponsorship has been made in your name by (giver's name). Your sponsorship package includes a one-year membership to Bat World Sanctuary, our *BAT WORLD* magazine and an informational card on bat rescue. Enclosed you will find a 5" x 7" photo of your adopted bat, who thanks you from the bottom of its little bat toes for the food and medical supplies your gift has provided.



Mildred



Bootsanna



Orphaned red bats



Peekaboo



Lil Drac



Ernie



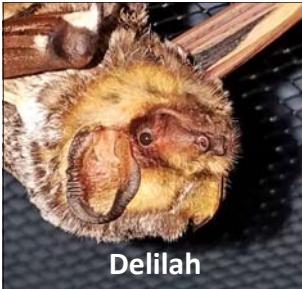
Benger the Avenger



Sticky



Gizmo



Delilah



Cornelius



Tinkerbelle

Please enter the name of bat(s) you wish to sponsor: _____

Name as it should appear on the certificate: _____

Email address (to receive our online magazine) _____

NOTE: We do not sell, trade, or share your personal information with anyone.

BILLING INFORMATION:

Name: _____ Phone _____ Date _____

SHIPPING ADDRESS:

Name (if different than above): _____

Address _____ City _____ State _____ Zip _____

Total of sponsorship (**Please remember to include \$5.00 shipping, USA only**): _____

Check enclosed _____ Charge _____

Credit Card Number: _____ Exp. Date: MO _____ YR _____

NOTE: If this is a gift Adopt-a-Bat please include any special instructions, such as a special message, on a separate piece of paper.



WHY SAVE BATS?

Roughly one of every four mammals on earth is a bat. Consider this: if your day includes soap, toothpaste, cosmetics, coffee, margarine, chewing gum, candles, paper, ink, wood, fuel, rope, twine, rubber, spices, vegetables, fruits, chocolate, margaritas, air fresheners or even life-saving medicines, you are not only involved with bats, you are likely dependant upon bats. Bats are among the most beautiful and beneficial animals on earth. They are clean, gentle and intelligent. Bats are vital for healthy ecosystems and enhance our lives in

many ways. Fruit and nectar bats bring us approximately 450 commercial products and 80 different medicines through seed dispersal and pollination. Up to 98% of all rainforest re-growth comes from seeds that have been spread by fruit bats. Insect-eating bats are literal vacuum cleaners of the night skies, eating millions upon millions of harmful bugs. They protect us by eating insects that destroy crops as well as insects that cause human disease.

Yet for all they do, bats are continually killed due to myths, superstition and fear. The life expectancy of a single bat may exceed 20 years, but slow birth rates limit their population growth. When just 5 bats are needlessly killed, a potential 100 years of animal life is destroyed. Worldwide, almost 60% of bats are either endangered or official candidates for listing, and they desperately need your help.

HOW YOU CAN HELP

In a world where so many look away, Bat World Sanctuary is on the front line to end the abuse and destruction of bats. We have been recognized as the world leader in bat rehabilitation for nearly two decades. Each year we rescue thousands of bats that might otherwise die. Lifetime sanctuary is given to non-releasable bats, including those that are orphaned, injured, confiscated from the illegal pet trade and retired from zoos and research facilities. You can help us save bats by educating others about their plight, and by donating to Bat World Sanctuary.

Bat World Sanctuary was founded in 1994 and is a 501c3 non-profit, volunteer-based organization. Donations allow us to continue our rescue efforts for bats.

Bats are now in their 11th hour. We can save them, but we cannot do it without your help. Bat World Sanctuary is not state or federally funded, our funds come from caring people like you. Please join us in our efforts to save bats by making a donation and becoming a member of Bat World today.

BATWORLD.ORG offers free educational materials, videos, kid's games and rescue information. You can even sponsor a bat in need through our Adopt-a-Bat program. Sponsors receive educational materials and *BAT WORLD*, our conservation magazine that includes beautiful photos of rescued bats. You can also receive an online membership to *Night Flight News*, our e-newsletter, by simply making a donation of any size through batworld.org.