The untold—and still unfolding—story of the Pacific Islands' rich and diverse species of bats
You can help save the world’s bats every pay period when you choose to give through the Combined Federal Campaign (CFC) and EarthShare.

**Combined Federal Campaign**
If you’re a federal employee or member of the military, please support us through the Combined Federal Campaign. All you have to do to donate is find Bat Conservation International (#12064) in your campaign catalog or online through the CFC universal giving portal, and follow the instructions on “How to make a gift.”

**EarthShare**
BCI is a member of EarthShare, a nonprofit federation of America’s most respected environmental and conservation organizations. EarthShare has engaged people and workplaces in conservation for more than 25 years, primarily through workplace giving. Ask your company’s human resources department about EarthShare and select Bat Conservation International to receive a single gift or a sum each pay period.

Contact EarthShare to learn how you can help introduce EarthShare@Work to your employer and support Bat Conservation International at your workplace! Learn more at EarthShare.org and info@earthshare.org.

**Matching Gifts**
Double, or even triple, your impact with a matching gift. Did you know that many employers will match donations made by current employees, employees’ spouses and retirees? This increases the impact of your investment! Check with your company’s human resources department to see if your employer sponsors a matching gift program.
OFF THE BAT
BCI’s Dave Waldien on why global conservation must be collaborative and culturally appropriate

SPECIES SPOTLIGHT
The wingspan of the golden-crowned flying fox is matched only by its ecological impact

MAKING A DIFFERENCE
Thanks to BCI’s many generous friends and members who gave this past quarter

ON THE WING
Using a tiny GPS transmitter to help tag and track the Florida bonneted bat and its habits

BATS IN PARADISE
The untold—and still unfolding—story of the rich and diverse bat species of the Pacific Islands
A global conservation commitment

By DAVE WALDIE N

Inevitable” is an apt way to describe why BCI has prioritized working with island bats around the world. With the conservation of globally endangered bats identified as one of our top priorities in our 2013–2018 Strategic Plan, many island bats naturally flew to the top of a list of species most in need of our help. Of the 78 bat species currently recognized as endangered or critically endangered on the International Union for Conservation of Nature’s (IUCN) Red List of Threatened Species, 68 percent are found on islands. Of all the regions around the world, the islands of the Indo-Pacific region are home to the majority of them and are highlighted in this edition.

But what does effective and sustainable conservation look like for endangered island bats?

This is an exceptionally difficult question, and our attempt to answer it must take into account not only the ecological needs of individual species, but also the needs of the communities that call these islands home. The threats that many island bats face are unique to each species and each island. While our tactics and strategies must differ by species, our fundamental philosophy for achieving sustainable conservation is built upon a collaborative approach that brings diverse stakeholders together to invest in and support local leadership. Just as each bat species faces a unique set of circumstances, so do many of the local island communities. For conservation action to truly work at a local island level, conservation strategies need to be culturally appropriate and inclusive—something BCI is working hard to achieve.

Although we continue to work as leaders and collaborators in global bat conservation, BCI recognizes that we do not have the capacity or resources to support or even engage on every priority bat conservation issue. While in some ways this gap in our capacity adds to our burden and certainly to the urgency in our mission, I am heartened and believe that we, and the broader conservation community, have the collective skills, knowledge and power to make a difference. We are not alone in our mission; we have support and participation from the IUCN Bat Specialist Group, bat networks, conservationists, researchers, educators and the global conservation community, as well as many governments, members of the corporate sector and the public. Together, we can achieve significant and sustainable conservation through raising greater awareness, seizing conservation opportunities, and collaborating on and implementing effective strategies.

I hope this issue of Bats gives you a greater appreciation of the conservation challenges facing island bats and insights into our collaborative initiatives in the Indo-Pacific region. Meaningful bat conservation is within our collective grasp, and I look forward to seeing what we can achieve together.

Dave Waldien
Senior Director for Global Conservation
Wind farm windfall

Department of Energy funds BCI efforts to develop, test ultrasonic bat deterrent devices

Wind turbines can endanger bat populations. In our efforts to address the problem of protecting wildlife while enhancing the responsible operation of this source of clean energy, BCI has found support from the U.S. Department of Energy, which announced in April that it would provide more than $1.75 million to fund five projects aimed at developing and demonstrating technologies that can reduce the potential negative impacts of wind farms on sensitive bat species. As a strategic partner working with one of the five projects, BCI will receive a portion of these funds for this initiative.

Ten years of BCI research has made it clear that many species of bats can be spared fatal collisions with turbine blades by preventing blades from spinning in low-wind conditions, when insects and bats are present in abundance. But not all species respond equally well to this strategy. As an alternative, BCI has been developing an ultrasonic acoustic deterrent (UAD)—emitting a loud sound humans can’t hear—that bats will avoid. Placing UADs on turbines may allow wind farms to operate normally while dramatically decreasing bat kills.

The success of BCI’s prototype device has encouraged the Department of Energy, the Spanish wind company Iberdrola and others to support further development of this technology. The current grant will allow BCI researchers to conduct reliability tests for the next generation of this device, carrying out a full-scale validation of its effectiveness at a wind plant, while comparing that effectiveness to the current system of turbine curtailment.
The first Earth Day took place on April 22, 1970, and became recognized as a worldwide event in 1990.

Earth Day Texas

BCI’s bat presentation proved to be a hit with festivalgoers

The Earth Day Texas festival, held in April at Fair Park in Dallas, Texas, is a family-friendly event that brings together leaders in the corporate, academic and nonprofit worlds to show Texans how green choices can lower their cost of living, improve their health and help save the environment. The conservation message presented by BCI’s Board Chair, Dr. Cullen Geiselman, and our Education & Public Outreach Manager, Dianne Odegard, was well-received on the main stage, but the stars of the show were the live bats.

Using new presentation equipment, including an Elmo projection camera, Odegard was able to give the audience an up-close and personal look at many of the state’s native bat species while providing only minimal disturbance to the bats. The fun didn’t stop there; BCI’s interactive booth also was a big draw—especially for children in attendance, who were eager to play our large interactive board game. Students from the Dallas Independent School District helped answer questions and learn unique “bat facts” as they moved their bodies around the board.

It’s a winner!

BCI’s Bats magazine wins design award

Along with its new look and feel, we have been steadily expanding the scope of our quarterly Bats magazine to include a wealth of stories and images to better explore the fascinating diversity of bats around the world. Bats serves to connect our members, supporters and the broader community to the larger stories of bats and their far-reaching effects on conservation, public opinion, human health, research, habitat restoration, agriculture and the economy. Thus far, two issues into the redesign, feedback has been overwhelmingly positive, and we are seeing more and more of our content and topics being picked up by other media outlets.

Others are noticing, too: Bats magazine is now a proud recipient of the 2015 Apex Award of Publication Excellence for Design & Layout. BCI hopes this accomplishment will further promote its mission of protecting the world’s bat population through education and research.

WISH LIST

Help us be a voice for bats

Gifts in support of Bats magazine will help us cover costs associated with research and original writing, photography, and more. Visit batcon.org/wishlistbats to help ensure the magazine’s continued excellence.
Bats at the White House
At this year’s Easter Egg Roll, bunnies had competition from bats

BCI and the Organization for Bat Conservation (OBC) were invited to join the family fun at the White House’s annual Easter event to promote the benefits of bats and other wildlife in sustainable agriculture.

More than 35,000 people gathered on the South Lawn to join in activities with the President and the First Lady. While we were sad not to receive a visit from the much sought-after couple, we enjoyed talking with the thousands of people interested in bats. Attendees met four different bat species up close, including a very popular Malayan flying fox (Pteropus vampyrus), and gained an appreciation for how bat conservation is connected to healthy human lifestyles.

The theme of this year’s White House event was “#gimmefive,” which encourages Americans to share with others five things they are doing to lead a healthier life. It was all a part of the First Lady’s “Let’s Move!” campaign, which promotes healthy lifestyles in children.

Ensuring a bright future
Announcing the Verne and Marion Read Bat Conservation Award

Verne and Marion Read were among the earliest and most ardent supporters of BCI. They shared a love of the world’s bats with family and friends, and on their numerous adventures abroad. They also worked tirelessly with Merlin Tuttle (BCI’s Founder) to launch BCI, and we are achieving conservation around the world because of their dedication and commitment. To honor their leadership, the BCI Board of Directors is proud to announce the establishment of the Verne and Marion Read Bat Conservation Award, a funding opportunity for those wishing to strengthen bat conservation beyond the U.S. and Canada.

Recipients of this distinguished award will be chosen from among the applications received by BCI during a given year in response to Requests for Proposals. The Verne and Marion Read Bat Conservation Award will inspire education and community action to protect bats around the world and address critical conservation needs.

Since 1998, BCI has awarded more than $1 million to more than 200 aspiring bat conservation leaders for projects in 40 countries. Many of those recipients are now recognized for their expertise at the highest levels in their home countries and within the international scientific and conservation communities.

WISH LIST
Support local, sustainable action

This annual award will provide financial support to worthy individuals and organizations promoting innovative approaches to bat conservation at the local level focused on sustainable results. Please contact us at (512) 327-9721 extension 14 for more information, or visit batcon.org/readaward to support this fund.
THERE ARE 1,331+ SPECIES OF BATS IN THE WORLD. THIS IS ONE OF THEM.

**Golden-crowned flying fox**

**BINOMIAL**
Acerodon jubatus

**FAMILY**
Pteropodidae

**ROOSTING**
co-roost with other species; small numbers to 1,000+

**WINGSPAN**
up to 5’6” (1.7 meters)

**DIET**
frugivorous

**IUCN RED LIST STATUS**
Endangered

**REGIONS**
The Philippines
A megabat species that plays an important ecological role in the Philippines

The golden-crowned flying fox (Acerodon jubatus) is a fruit-eating megabat found only in the Philippines. It is one of the planet’s largest bat species, with a wingspan up to 5 feet 6 inches long and a weight of up to 2.6 pounds. The genus to which it belongs, Acerodon, includes four other megabat species found in Southeast Asia. The golden-crowned flying fox, however, is the only one of this genus whose range encompasses a large part of the Philippines.

In areas where hunting and roost disturbance are prevalent, this megabat retreats to undisturbed native forests, avoiding humans, and often roosting on very steep and hard-to-access slopes 0–1,000 meters above sea level. Conversely, where laws against hunting are respected and disturbance is minimized, golden-crowned flying foxes can be found in forest patches near human population centers, including along roads and on resort grounds. In all cases, this species enjoys having other bat neighbors, as they share their roosts with several flying fox species—most commonly the large flying fox (Pteropus vampyrus).

The eating habits of this flying frugivore play an essential role in the multiple forest ecosystems in which it lives. As it eats fruits, primarily figs, it distributes their seeds all over the forest, contributing to reforestation in the Philippines. It also will sometimes eat fruit grown for agricultural use, but only if it is near undisturbed forests.

While the golden-crowned flying fox is one of the largest bat species in the world, it can be incredibly hard to find, as habitat destruction and hunting have caused huge declines in this species’ numbers in the past and continue to threaten its survival. Local communities hunt bats for sale, sport and personal consumption. In addition, more than 90 percent of the Philippines’ old-growth forests have been destroyed, and the species has completely disappeared from several of its old roosting sites on multiple islands.

In order to preserve the golden-crowned flying fox, BCI has been working with two Filipino non-governmental organizations that collaborate with national and local government units, other NGOs, and local communities to protect roosting sites and educate people. (For more on conservation in the Philippines, see page 10.)

FIND A NEW FACE
To see and discover more about this and other bat species around the world, access BCI’s Pinterest page via batcon.org/pinterest.

ARE YOU TALLER THAN A BAT?

Meet a Megabat
Acerodon jubatus
Did you know that the golden-crowned flying fox has one of the longest wingspans in the entire world? In fact, some are known to measure up to 5’6"! How do you measure up to this megabat?
Clockwise from top: Mount Balbi, Bougainville; Mambukal Mountain Resort, Philippines; and a greater monkey-faced bat.
For many in the Western world, the necklace of 27,000 islands stretching from the south of Asia eastward across the warm, sunny Pacific is the stuff of fantasy and escape, and the very definition of tropical paradise. Although often very small in size, these islands play a huge role in the realm of bats. Collectively, these islands are home to some of the biggest and most unique bats in the world. But while these bats contribute greatly to the Pacific Islands' incredible species richness and diversity, their existence there is in jeopardy.

This region, which extends east to the Cook Islands in central Polynesia and north to Ryukyu and Ogasawara in Japan, contains an astonishing 31 percent of the currently recognized bat species on earth and approximately 74 percent of those species commonly called flying foxes. In many places throughout these islands, bats are the only native terrestrial mammal.

Some of the bats in this global region are known to inhabit various locations across a vast stretch of the globe. Other species dwell in only one location. Diversity of bat species in this area is largest on the bigger islands off of mainland Southeast Asia; Indonesia alone is home to 219 bat species, more than any other nation in the world.

**Geology Meets Evolution**

It is also here in the tropical Pacific Islands that some of the newest landmasses on earth are being created, as tectonic plates on the earth’s crust scrape against one another and gradually fold upward, and volcanoes located under the water spew forth lava that eventually builds up into mountainous peaks on the forming masses.

This intense geologic activity plays a special role in the evolution of bats, says Chris Filardi, Director Pacific Programs for the Center for Biodiversity and Conservation at the American Museum of Natural History. The mainland often is just close enough to these relatively new land formations that some mainland species are able to fly over the water and reach the new locations. But once there, the species are just far enough away from the mainland that they either do not seek to return or cannot easily do so.

**GLOBAL ALLIANCE FOR BAT CONSERVATION**

Earlier this year, BCI and the International National Trusts Organisation (INTO)—a London-based network of more than 60 national conservation and historic preservation organizations, with a combined membership of nearly 8 million—forged a unique partnership to protect the world’s 1,330-plus species of bats. The two organizations will share information regarding best practices and work to provide the public with reliable information about the value of bats and the threats they face.

“In this time of climate change and widespread habitat loss, it is more important than ever that international conservation organizations work together to save these vital animals. The immense value of bats to our environment is becoming clearer to people around the globe,” said INTO Chairwoman Fiona Reynolds.

The INTO-BCI agreement is already bearing fruit in Fiji, where the National Trust of Fiji, BCI and the local organization NatureFiji are teaming up to protect the critically endangered Mirimiri fruit bat, found only on the island of Taveuni, and the Fijian tree-tailed bat, known only from a single cave on the island of Vanua Levu.

continued on page 11
Visitors to golden-crowned flying fox roosts can view the animals from a safe distance using spotting scopes.

THE PHILIPPINES

Protecting one of the largest bats in the world, the golden-crowned flying fox (Acerodon jubatus), will take more than just conserving its habitat; it will take changing attitudes and traditional practices.

To do this, BCI has partnered with two local organizations, the Mabuwaya Foundation and the Philippines Biodiversity Conservation Foundation Inc., which in turn have collaborated with more than 20 other organizations to form the Filipinos for Flying Foxes Initiative. This initiative aims to help stabilize and recover the species through protection of roost sites and community outreach.

Listed as endangered by the International Union for Conservation of Nature (IUCN) Red List, the golden-crowned flying fox is threatened not only by deforestation and fragmentation of its habitat, but also from hunting by local communities. Although illegal throughout the Philippines, hunting for sport, sale and personal consumption of these large flying foxes at their roost sites is the greatest threat to the species’ survival.

Many people who live close to bat roosting locations are often surprised to find out how vulnerable golden-crowned flying foxes are, says BCI Global Conservation Program Manager Chris Woodruff. When asked, people will sometimes say they assume there are hundreds of thousands of them in any given location, but scientists estimate that only about 10,000 individual bats of the species exist—an extreme decline from the numbers that were seen in the Philippines a century ago.

While the Filipinos for Flying Foxes Initiative has sought to train local leaders to protect some of the roost sites, education, Woodruff says, can play an even larger role in deterring hunting. “Understanding that different animals reproduce differently—bats aren’t like rabbits that may have 12 young per year and quickly overcome population declines—can be very powerful,” he adds.

To that end, the initiative is working with local communities to develop roost sanctuaries to not only to protect the golden-crowned flying fox from hunters, but also to use as educational tools and tourist attractions.

Well-known champion of Philippine wildlife Marites “Tess” Balbas has been working with the initiative to identify and protect roosts in many places, including the Northern Sierra Madre Natural Park in Luzon. Her organization, the Mabuwaya Foundation, has been celebrated for its community-based work with crocodiles, and many thought the same approach could be used for protecting bats.

“We think it is important to tell people about the flying foxes because they can be the foresters of the future, as they spread seeds over great distances,” she says.

To date, the two-year-old program has been able to establish six sanctuary roost sites across the Philippines. The latest sanctuary, launched at Mambukal Mountain Resort in June, is the result of much discussion, education and training efforts with resort staff and management, as well as engagement with local leaders in the community. The resort is one of the top tourist destinations in the Negros Islands and hosts a colony of flying foxes, which include golden-crowned flying foxes, as well as flying foxes (Pteropus vampyrus) and island flying foxes (Pteropus hypomelanus), all of which are protected within this newly recognized sanctuary.

“This is the first formally declared bat sanctuary managed by a resort in the Philippines,” explains Lisa Paguntalan, Director of Field Operations at Philippines Biodiversity Conservation Foundation Inc. “This initiative has raised the standards of how resorts can facilitate and help in biodiversity/bat conservation, and is one that can easily be replicated. This is, therefore, a very exciting development both for bat conservation as well for how private corporations can contribute to advancing conservation.”

Beyond education at roost sites, the initiative has been engaging younger generations with the bat conservation message. Working with school groups, local partners have been teaching children the importance of all bats to the forests through puppet shows and educational materials. The ability of BCI to partner with these groups that already have great relationships within local communities is key to the success of this initiative. BCI can bring a global perspective and international credibility to the table, but for long-term success the conservation effort needs to be locally based.

“We realize that the initiative cannot depend on BCI always investing money and having staff closely monitoring this project,” Woodruff says. “The idea is to empower and build up the local capacity to a point where local communities can take the lead on the initiative.”

To generate further in-country support for community action, BCI is engaging with the Philippine Department of Environment and Natural Resources. With their support, it is hoped that a combined government and community-based effort can advance long-term conservation of the golden-crowned flying fox.
so; this isolation on these islands then forces the bats to adapt and evolve to fit their new surroundings. Luckily, on most of the islands, there are very few other mammals such as monkeys competing for resources. The process "lends itself to the sort of evolutionary trajectories that tend to become unique," Filardi adds.

That same intense geologic activity also causes the formation of mountain peaks, which in turn provide new niches and habitats within which bats can evolve. For example, bats that move upward toward the peaks to roost follow a different evolutionary pathway than those that stay in the lowland, rainforest coastal areas.

"Many people don’t realize that the colonization of bats in the South Pacific began in the Solomon Islands," says Patrick Pikacha, who grew up in Papua New Guinea and is now a researcher working with Queensland University in Australia. In this archipelago, the elevation shifts from sea level to just above 8,000 feet. For mountain-dwelling bats, the high end of this elevation makes these islands a rare draw in this region.

"If we pan east across the South Pacific, we won’t reach another high elevation again until we reach the Andes in South America," Pikacha explains. "If we pan west, we won’t reach another until the mountains of New Guinea."

Cyclones also likely play a role in moving species through the area over time, picking up some bats and transporting them to new, flatter locations, Pikacha says. This phenomenon can cause further evolutionary twists and turns: Those bats that arrive on more isolated, flat islands may again change into something very different from bats of the same species that remain in the mountains among more densely clustered island chains. But with fewer niches within flat terrain, has been challenging.

"We are starting to ask what are the true sources of stress here for bats, and how can we relieve them," says BCI Senior Director for Global Conservation Dave Waldien.

To answer these questions BCI is engaging with the local communities. Although the island is small in size, it is home to several diverse groups of

Indigenous Peoples. BCI is working with the help of Rotokas Ecotourism Group (RET), a local Civil Society organization established by members of the Rotokas people in the Wakunai District, to build partnerships with the clans of the region.

Many of the clans that live across the island have traditions of living in harmony with their environment and retain valuable traditional knowledge of many bat species. By working with local clans, BCI hopes to launch a sustainable bat conservation initiative to address the issues of deforestation, hunting and lack of scientific information in a manner that respects local culture and empowers the communities.

BCI engages with local Bougainville residents at an important community workshop that took place at the beginning of the Numa Numa trail.
such islands harbor fewer species than their mountainous neighbors. As a result, the diversity of bats decreases from west to east: The Solomon Islands are home to more than 40 species; in Fiji, there are only six; and Tahiti does not have bats at all.

Closing the Research Gap
Information on the bats of this region is still being gathered, and some major taxonomic questions remain unanswered. In some locations, political and economic upheaval has made research difficult. In others, geographically remote roosting locations have proven especially hard to survey.

In 2005, Kris Helgen gained worldwide attention for discovering a new species of bat from the islands of Bougainville: the greater monkey-faced bat (*Pteralopex flanneryi*), which was also quickly labeled one of the largest bats on earth. Helgen made his discovery at the Smithsonian Institution, where he works as the curator-in-charge of the division of mammals. He has not yet been able to see the bat in its native habitat.

‘A completely clear picture of how all this works across Southeast Asia and the Pacific is still emerging, and that’s maybe one of the most exciting things to realize,” Helgen says. “If we are still naming the biggest bats out there, then there’s a lot of the picture that hasn’t taken shape yet.”

As travel has increased across the globe, so have the opportunities for researchers like Helgen to do their work. Islands that were once very remote and very sparsely inhabited are also becoming easier to reach for field research. He also notes that development has brought an improvement in training and access to education and resources.

“Many people in these countries that have this biodiversity are now the ones able to study it,” Helgen continues. “That’s a source of great optimism for me. The techniques are getting better, and the playing field is being leveled in terms of scientists from the developing world doing this work.”

Yet such optimism, whether it’s attributed to research or other advances, remains tempered by many considerable conservation concerns regarding bats living in the tropical islands of the Pacific.

The Conservation Challenge
The numbers are stark: Experts say that 70 of the region’s bat species are threatened at some level—11 species are considered critically endangered, 22 endangered, and 37 vulnerable.

Habitat is disappearing for many of the region’s bat species due to development, logging,
all too familiar—extensive deforestation, cave disturbance, hunting, lack of scientific information and persecution. However, BCI remains cautiously optimistic in this case, as we have begun to collaborate with an amazing group of in-country partners and international organizations. These include NatureFiji MareqetiViti, National Trust of Fiji, University of South Pacific, the Smithsonian and Fiji’s government, to name a few. (For details on BCI’s recent partnership in Fiji with the International National Trusts Organisation, see the sidebar on page 9.)

Together, we are developing and starting to implement a unified national bat conservation vision. Our next steps are to work with local communities to secure and restore the only known maternity cave of the Fijian freetailed bat and to launch a field expedition to better understand the distribution and critical roosts for Fiji’s endangered bats to inform our conservation actions.

Deforestation plagues the Philippines, among other Pacific Islands.

Increased agriculture and fire. Statistics are not available for every island and vary widely from nation to nation, but where numbers are available, the amount of change is dramatic. In the Philippines, for example, more than 90 percent of the country’s primary forest has been removed.

In some tropical island countries of the Pacific, forest coverage has remained healthy, but many of the places with tree cover are filled with both secondary forests that have been highly disturbed and exotic species, which results in a degraded habitat for bats.

“Bats are a good bellwether species,” says BCI Executive Director Andrew Walker. “If there’s one thing these islands are suffering from, it is acute deforestation.” Walker says he’s been shocked to find that many of the forests he has known during decades of travel to Fiji, for example, have been dramatically transformed and now look more like the grasslands of Wyoming.

Increased travel and economic opportunities, which are helping some of the nations in this part of the world develop rapidly, can...
improve the standard of living for people, Helgen notes. But they also bring an increase in urbanization and the spread of agriculture, causing change at a speed that is “sobering.”

“There has been a massive transformation of the original native forests into these other types of uses,” Helgen says. “Of course, many types of bats can use those habitats that are replaced. But in many cases or most, they can’t.”

Although bat hunting is illegal in many of the tropical islands of the Pacific, it remains popular and is also a huge conservation challenge.

“There are a lot of people-bat interactions in Southeast Asia,” says Tammy Mildenstein, an assistant professor and Old World fruit bat researcher from Cornell College. Mythical stories and oral histories about bats and their spiritual powers abound, but at the same time, many communities also consider bat meat a very healthy food choice.

Flying foxes seem to be particularly vulnerable. Despite their name, flying foxes are not closely related to their namesake canines, but they often have facial features that are remarkably similar to European foxes—pointy muzzles, large eyes and triangular ears. Like other megabats, most flying foxes are fruit-eaters that do not use echolocation but instead depend heavily on their sense of smell.

Flying foxes are also very large and roost hanging upside down from trees in groups that can include thousands of individuals. This has made them incredibly vulnerable to hunters in recent decades, says Mildenstein.

Most bats, like the endangered golden-crowned flying fox, (Acerodon jubatus), only have one pup per year during a synchronized breeding season. If hunters attack bats who are pregnant or holding their pups close to their bodies as they sleep during the day, it can potentially wipe out an entire year’s worth of reproduction at a single site. (For more on the roosting habits and known activities of the golden-crowned flying fox, see page 6.)

Even disturbances during the breeding season can be a problem, Mildenstein notes, because they can cause a panic in the mothers, who sometimes drop their babies to the forest floor as they flee gunshots and the smell of hunters’ cigarettes.

Even so, Mildenstein says she finds that the hunters often care very deeply about the bats in Southeast Asia. “They want to eat them, but they don’t want them to go away permanently as a result of hunting,” she says.

“There’s no way around the fact that Pacific Islanders themselves are the greatest hope for conservation in these local environments,” says Filardi. “Where they have sovereignty, the future is in their hands. And really there are no better hands to hold the future of the islands than the people and cultural histories that have been birthed by these places. If science has a role, then it is in strengthening the curiosity, the commitment and the vision that exists in the Pacific Island communities.”
New Zealand’s lesser short-tailed bat (*Mystacina tuberculata*) is unusual in more ways than one. Omnivorous and opportunistic, these bats forage on the forest floor when searching the night sky yields little food. With a majority of their weight in their wrists, they can comb through deep leaf litter and munch on all the critters they find.

But the temperate bat’s *un*-bat-like behavior extends beyond its dietary habits. When it comes to the mating game, the furry creature has adopted new rules by which to play.

It starts with a song. Tucked away in the cavity of a hollow tree, the male lesser short-tailed bat is known to vocalize for hours in pursuit of a female. Singing from the roost, however, is not where the anomaly lies; many other species of bat are known to carry a tune. What is unusual, albeit fairly straightforward, is what happens next: In response to the males’ vocalizations, the female
Lesser short-tailed bats are also at risk from introduced predators such as rats and stoats.

Lesser short-tailed bats act as promiscuous independents as they seek out males on display—without concern for any direct gains those males might provide as a result of a sexual encounter. In scientific terms, the lesser short-tailed bat practices what researcher Cory Toth refers to as “lek breeding.”

“Lek breeding is a system where females receive no resources from the males,” he says. “They’re just selecting males based on the quality of their displays and so it’s basically a distilled version of sexual selection.”

With funding from BCI, Toth managed to keep track of the lesser short-tailed bat’s mating patterns using microchip technology and infrared cameras. In doing so, he realized the bat’s “weird mating system” was indeed consistent with the defined characteristics of lek breeding.

To this day, lek breeding remains one of the most confounding mating systems among mammals. Leks are presumed to form in part for economic reasons. Frugal males who are at a loss trying to protect their resources or defend a mate ultimately decide to advertise only for one-night stands.

For the male lesser short-tailed bat, self-advertisement—in the form of sexual display and singing—occurs in small holes found in trees. It is presumed that males sing from the cavities in order to attract potential lovers. Much to Toth’s surprise, the male bats also divvy up the “singing duties,” with multiple males sharing a single cavity on a one-at-a-time basis.

Toth’s discovery is not all it seems, however. According to his research, a major “side effect” to lek breeding is that the lesser short-tailed bat can only survive in undamaged tracts of native forest. As New Zealand forests become more and more fragmented, the remaining populations of lesser-short-tailed bats decline by extension.

And just as a performer needs a stage, the male bat needs that forest. Not just for eating or sleeping. But also for singing.

**BAT BALLADS**

For more on lesser short-tailed bats’ songs, visit [batcon.org/mystacina](http://batcon.org/mystacina).
There are two bat species in Galapagos: Lasiurus cinereus and Lasiurus brachyotis; little is known about either.

Ecuador has long been known for its ecological riches: It is considered one of 17 countries in the world with “megadiversity” and is recognized as having the most biodiversity per square kilometer of any nation. And this wealth of endemic plants, birds, reptiles, butterflies as well as the renowned fauna of the Galapagos Islands routinely garner headlines. Until recently, though, Ecuador’s bats have received relatively little fanfare — despite the fact that with 173 species, the tiny country is home to more than 12 percent of the world’s known bat species.

This lack of attention on the country’s bats began to change in February 2015 when the Program for Bat Conservation in Ecuador (PCME), led by Santiago Burneo of the Pontificia Universidad Católica del Ecuador, and Ecuador’s Ministry of the Environment held the first Bat Specialists Workshop with the goal of producing a national action plan for bat conservation.

Chris Woodruff, BCI’s Global Conservation Program Manager, traveled to the workshop in Quito to reinforce the importance of the Ecuadorian government adopting the plan’s recommendations. Woodruff also emphasized the need for a collaborative approach, whereby all of the country’s conservation stakeholders, from researchers to local and international NGOs, recognize the value of bats and join together to implement conservation actions for the most critical habitats and species of concern.

Nineteen bat species are considered seriously threatened at the national level within Ecuador. At a global scale, the IUCN Red List of Threatened Species lists three bats as endangered (Amorphochilus schnablii, Balantiopteryx infusca, and Platyrrhinus chocoensis), and an additional four species are listed as vulnerable. Eleven more are so poorly known that they are simply considered “data deficient.”

BCI congratulates the PCME and the Ministry of the Environment for taking the initiative to launch a national bat conservation action plan, which will be only the second such plan in all of South America. Furthermore, BCI is already taking proactive steps with our local partners to raise funds and begin on-the-ground conservation at priority sites and for priority species in the country.
MAKING A DIFFERENCE

Your support enables BCI to engage with communities around the world in bat conservation.

THANK YOU TO:

INDIVIDUAL & FAMILY DONORS

We offer our deepest gratitude to these individuals and families for their generous support of BCI as we work around the globe to protect bats and their habitats. We are honored to recognize several groups of donors, those who contributed $250 or more from Nov. 1, 2014 through March 31, 2015, our Monthly Recurring Members, new Legacy Circle Members and the Estates of past supporters. Thank you all for your leadership and encouragement.

$10,000 & Above

Dr. Cullen Geisselman
Robert and Annie Graham
Mr. Daniel Martz
Mr. William N. Mayo
Terry and Bill Pelster
Ms. Beth Robertson
Ms. Catherine Sachs
Mr. Herb Stumberg
Ms. Karen L. Van Dusen

$5,000 - $9,999

Anonymous (1)
Dr. and Mrs. Howard F. Burt
Ms. Susan A. Fredericks
Ms. Rebecca M. Harvey
Dr. and Mrs. Stanley J. Herman
Ms. Violet Margly
Ms. Anna Lawson
Ms. Jo Ann Engelhardt
Ms. Lydia Edison
Sylvia A. Earle, Ph.D.
Mr. Howard Dudley
Ms. Nancy Dudley
Mr. Martin P. Doyle
Ms. Twila Dove
Mr. Daniel Donovan
Ms. Cathy Coleman
Mr. David Cohn
Ms. Jane Civins
Mr. and Mrs. Lynn Christiansen
Ms. March Cavanaugh
Mr. Edward Carpenter
Ms. Melissa Carp
Mr. Tim Caron
Ms. Susan B. Clark
Mr. Tim Cliffe
David and Cindy Cochran
Ms. David Cohn
Ms. Cathy Coleman
Dr. Joanna-Louise Coleman
Ms. Stephaire E. Condon
Ms. Anastasia Condon
Ms. Curby Conley
Mr. George M. Covington
Ron and Karen Cozian
Ms. Sharon Cunningham
Mr. and Mrs. Charles Davidson
Mr. John Dayton
Ms. Jennifer Dean
Ms. Saray deLooze
Cal DeReme
Mr. James Dever
Mr. Joshua Dey
Ms. Cynthia Dietzen
Ms. Barbara DiPietro
Mr. Danielle Draper
Ms. Twila Dow
Mr. Martin P. Doyle
Ms. Nancy Dudley
Mr. Howard Dudley
Sylvia A. Easte, Ph.D.
Ms. Lydia Edison
Dr. Anne Ehrlich
Ms. Jo Ann Engelhardt

$250 - $999

Anonymous (13)
Mr. Michael Adami-Sampson
Mr. Harry S. Affleck, Jr.
Mr. Jeff Alvarez
Mr. Godfrey Amphillett
Wendy and Dave Andrews
Ms. Gary A. Bangs
Mr. Hugo B. Banca
Mr. Paul Bentz
Mr. James Bibro
Ms. Susan Billedeaux
Ms. Caroline Bossell
Mr. Denis Blanchet
Ms. Cindy Boudin
Jeffrey and Freya Brown
Mr. John Braggin
Mr. Greg Brodel
Ms. Coco Brennan
Ms. Monica Briss
Ms. Eleanor Briggs
Mr. and Mrs. Phil Boddie
Mr. Gary B. Brubaker
Ms. Sheldon V. Brooks
Mr. Robert T. Brown
Mr. Brian Brumit
Ms. Darla Brunner
Mr. William A. Bunro
Ms. Carole Burke
Mr. William D. Burrows
Dr. Carol Butterworth
Prassade Calabah, Ph.D.
Mr. Tim Caron
Ms. Melissa Capp
Mr. Edward Carpenter
Mr. March Cavanaugh
Ms. Willow Cheele
Ms. and Mrs. Lynn Christiansen
Ms. Jane Crins
Ms. Susan B. Clark
Mr. Tim Cliffe
David and Cindy Cochran
Mr. David Cohn
Ms. Cathy Coleman
Dr. Joanna-Louise Coleman
Ms. Stephaire E. Condon
Ms. Anastasia Condon
Ms. Curby Conley
Mr. George M. Covington
Ron and Karen Cozian
Ms. Sharon Cunningham
Mr. and Mrs. Charles Davidson
Mr. John Dayton
Ms. Jennifer Dean
Ms. Saray deLooze
Cal DeReme
Mr. James Dever
Mr. Joshua Dey
Ms. Cynthia Dietzen
Ms. Barbara DiPietro
Mr. Danielle Draper
Ms. Twila Dow
Mr. Martin P. Doyle
Ms. Nancy Dudley
Mr. Howard Dudley
Sylvia A. Easte, Ph.D.
Ms. Lydia Edison
Dr. Anne Ehrlich
Ms. Jo Ann Engelhardt

Ms. Anne W. Eyverly
Fred and Mary Anna Feitler
Matthew, Michael and Maki Fife
Mr. Edward A. Firestone
Judy and Arnie Fishman
Mr. Robert G. Florand
Ms. Cindy M. Flood
Jennifer and Pammel Flynn
Mr. Thomas Francis
Nicholas Frankel
Awato Fujino
Mr. James Gaddis
Ms. Christian Gainsley
Stephanie and David Galt
Ms. Arvill Gardner
Ms. Christiana Garton
Ms. Barbara Garwood
Robert and Peggy Gerrie
Mr. Daryl W. Gerwin
Mr. Paul Gilbert
Beverly and Lee Gilman
Stew Tonkay and Patty Glynn
Ms. Ann D. Goldblatt
Mr. Mitchell Golden
Ms. Jennifer Goodwin
Mr. and Mrs. Frederick Grabowske
Ms. Spike Gram
Mr. Frank J. Granian
Ms. Anne Greene
Ms. Arveil Greenway
Mr. Robert Gregory
Mr. Mark Grosse
Vickie Grove
Miss April Hagen
Mr. Eric Hagenor
Ms. Kathleen Hamilton
Ms. Hollis Hansen
Ms. Judith M. Harada
Rob Hardy, M.D.
Mr. Keith Harrington
Ilene Goldstein and Bruce Hart
Mr. Ann H. Harvey
Ms. Karen Harville
Ms. Judith Haskell
Mr. John Hatchell
Mr. Axel Hauboldt
Ms. Constance L. Havner
Ms. Rebecca G. Hayes
Mr. Matthew Hedman
Mr. Ken F. Heim
Dr. and Mrs. Chris Heim
Ephraim and Kira Heller
Brian Michel and Jo Ann Herr
Mr. Alan P. Hewett
Ms. Trista Hoffman
Mike and Gayla Horn
Ms. Inga Horton
Dr. Robert J. Howe
Liz Strauss and Mark Hughes
Ms. Sarah Hunt
Ms. Colleen Hustead
Ms. Pope
Inner Space Cavern
John Talbot and Nora Iversen
Mr. Steve Ivey
Donald and Diane Jackson
Ms. Mary Jasnowski
Mr. Peter Jaszi
Ms. Flora-Louise M. Jenkins
Mr. Richard K. Johnson
Mr. Walt Johnson
Ms. J.E. Jones
Rob Eliu and Suzanne Jones
Mr. and Mrs. William Jones
Doug Busch and Andrea Jones
Ms. Judith M. Joy
Ms. Laura Joyce
Mr. Michael L. Karapetian
Mr. Charles Keenan
Joan and Herb Kelleher
Dr. Elizabeth Kempski
Mr. Michael Kenner
Mrs. Charlotte Kidd
Mr. Edward King
Kathryn Lee Kirkland, M.D.
Gail and Jeff Koslosky
Dr. Felicita Koller
Mr. Mike Kong
Edith and Robert Korn
Mr. Michael J. Koski
Ms. Beth Kuby
Ms. Cindy Kunzi
Laura Plath and Richard Kunz
Ms. Ellen Kurtz
Ms. Diane Lamb
Ms. Elizabeth Lambert
Mr. and Mrs. Richard Lane
Mr. Stephen Lankford
Ms. Lenora Larson
Dr. Kathleen Lavin
Ms. Nancy Lenon
Ms. Nina Lewin
Jeffrey and Anita Liebman
Mr. Brian Lies
Ms. Lucinda Long
Dr. Steve Lovelace
Mr. Andrew Luk
Ms. Mary W. Lunt
Mr. Daniel MacEachron
Tom and Phyllis Mahan
Ms. Pamela Maher
Ms. Rochelle Mains
Mr. Vaughan C. Maley, Jr.
Mrs. Barbara Malloia
Mr. Terry Maloney
Howard and Lynne Markus
Ms. Adrienne Mars
Charlae Massion, MD
Nancy and John Matro
Ms. Sara D. May
Thomas and Dorothy Mayer
Edith and Teddy McClure
Mr. and Mrs. William McCarty
Ms. Gloria McClain
Ms. Gail McDonald
Ms. Margaretha McGrail
Ms. Vera McLean
Ms. Dianne A. McLaughlin
Beverly Welcott and
Louis McLow
Mrs. Mimi McMillen
Ms. Lisa McCray
Ms. Therese Meike
Mr. Marc Melcher
Ms. Lori Menachof
Ms. Marie Messina
Barb Coster-Mikulski and
Mike Mikulski

Ms. Gate Epstein
Ms. Michele H. Finley
Robin and Carol Fiore
Ted and Kathy Flato
Mr. Cameron H. Fowler
Sheila Wallace and Gary M. Gabris
Robert Rowe and Joy Gaddy
Martin and Susan Giesecce
Mari Lundy and James Godshalk
Mr. Kyle Heim
George (Tim) and Karen Hilton
Esther F. Hope, D.V.M., D.A.B.T
Ms. Patricia Jacobina
Jo Korth Jagoda
Owen Brewer and George Jett
Mr. William J. Karwoski
Suzanne Neumann and
Andrew Kimmel
Mr. and Ms. Ray W. King
Ms. Elizabeth F. Kitchen
Ms. Ann Kneedler
Miss Patricia Knight
Jane and Bill Koon
Ms. Tilly Page Laird
Ms. Joanna Langdale
Ms. Anna Lawson
Liza Levy, M.D.
Mr. Ed Littlefield, Jr.
Jack and Carolyn Long
Maggie C. Brandt and
Albert Lyons, Jr.
Ms. Elizabeth Peetson Massar
Mike Schaefner and Michelle Matson
Ms. Mary Melkonian
Ms. Annette Menzel
Lois and Gene Merlino
Ms. Lynne Nelson
Mr. and Mrs. John W. Newman
Ms. Heidi Nitze
Ms. Virginia Ogle
Ms. Susan M. Penner
Kris Gubran and Pat Pliegel
Don and Lois Shepherd Porter
Ms. C. J. Puotinen
Andrew and Janet Raddatz
Capt. and Mrs. Thomas and
Lisa Read
Mr. and Mrs. L. George Rieger
Dr. Carolyn C. Riza
Mr. and Mrs. Dennis Roberts
Ms. Douglas Robertson
Mr. James Rosen
Ms. Kay Sibary and Mr. Robert
"Buck" Shaw
K. Rene Smith Staff
Fred and Alice Stancebaker Jr.
Darrell and Patricia Steagall
Joanna and Alice Sturm
Ms. Paula Szoroka
Mr. William Vanderdon
Mrs. Tomi Vaughan
Mr. Carl Vickery
Dr. and Mrs. Fred O. Vroom
Andrew and Christina Walker
Ms. Cynthia Wayburn
Martin and Sue Wezark
Mr. and Mrs. Marc Weiberger
Ms. Patricia R. Wood
Melissa Mason and
John Zapp

$1,000 - $4,999

Anonymous (1)
Robin M. Anderson, D.V.M.
Ms. Linda Barrett
Ms. Nancy Bernstein
Dr. Ulissa Brooks-Houer
Profs. Jane K. and
Marshall Brown
Capt. J. A. Carlton, USN, Ret.
and Major John I. McClurkin,
USMC, Ret.
Ms. Carol Carpenter
Jan and Jack Cato
Mr. David H. Clarke
Mr. Robert Coffland
Mr. Stewart Corn
Tracy and Michael Dileo
Mr. and Mrs. W. F. Dingus
Dr. and Mrs. William Dudley,
M.D.
Mr. Keith Dunlap
Your generous donations have allowed BCI to be the largest non-government funder of white-nose syndrome research.

Ms. Gretchen Schock
Mrs. Barbara Schmidt
Jessie Schilling
Drs. Sheila and David Schiferl
Mr. Stuart Schechter
Ms. Eliza Savage
Ms. Gail Rosen
Ms. Rebecca Rooney
Joanne and Jonathan Rogoff
Ms. Avice M. Rodda
Mr. Bill Rock
Mr. Steven B. Robertson
Ms. Elizabeth Richter
Mr. Stephen R. Robertson
Mr. Bill Rock
Ms. Anne Rehl
Mr. Nicholas John Reis
Mr. Bruce Richbourg
Mrs. Charles Richley
Mr. Steven B. Robertson
Mr. Bill Rock
Ms. Avice M. Rodda
Mr. Robert Rodgers
Joanne and Jonathan Rogoff
Ms. Rebecca Rooney
Ms. Gail Rosen
Mr. David Rosenstein
Mr. and Mrs. William L. Ruhling, Jr.
Avery Russell
Dr. Chris Sanders
Ms. Eliza Savage
Mr. Kirk Scarbrough
Mr. Stuart Schechter
Drs. Sheila and David Schiferl
Jessie Schilling
Mrs. Barbara Schmidt
Mr. Nelson Schneck
Ms. Gretchen Schneck

Jesse and Kitty Schroeder-Villarreal
Mr. Mel Schulze
Ms. Eleanor Schwartz
Mr. Kurt R. Schwarz
Mr. Wayne Schweinfest
Jim and E. Ann Scott
Mr. and Mrs. Tom Scribner
Dr. Forrest Spurgin
Ms. Vera Severouk
Leslie Shad
Mr. David B. Shapiro
Ms. Rebecca Shapley
Ms. Amy Sharp
Mr. Henry D. Shaw
Mr. Rob Sheppard
Candace Carroll and Len Simon
Ms. Jane A. Simpson
Rear Admiral Andy M. Singer
Ms. Sue Sirkus
Ms. Carla M. Skinder
Mr. Wes Smith
Capt. Charles Smith
Mr. Mary D. Smith
Mr. Ernest W. Smith
Kim and Joe Smith-Cupani
Ms. Sharon Solomon
Mr. Wendell Starr
Cheryl and Steven Stegmaier
Ms. Brenda Stein
Mr. Harry E. Stephens
Ms. Cynthia P. Stevenson
Mr. and Mrs. Marshall T. Stevens, Jr.
Mr. Michael Sullivan
Ms. Jennifer Sullivan
Ms. Elaine Suriano
Mr. Christopher Svara
Mr. Eric Taylor
Clement Targey
Mr. Glenn Taylor
Ms. Gillian M. Teichert
Ms. Marcia A. Thomas
Ms. Dana Thomas
Kathryn Hunter and David Thrombide
Ms. Jessamy Thomison
Dr. Chandra Throckmorton
Curtis and Laura Thurman
Ms. Lisa Tienter
Mr. Jack H. Tobias
Ms. Nancy Tongren
Ms. Jaime Trautman
Mr. Richard Upton
Ms. Michele Vaghanj
Ms. Cara Van Brunt
Ginger and Bill Vermooten
Ms. Ursula Vernon
Ms. Leslie Vinson
Ms. Susan Walker
Suzanna Auer and Alexander Walsh
Ms. Marisa Walthall
Ms. LaDonna J. Ward
George Bailey and Porter Watkins
Mr. Pat Watts
Ms. Pamela Weber
Mr. Thorn T. Welde
Mr. Arlen Westbrook
Mrs. Drewry H. Westerman
Carol Eklund and Lewin Wickes
Sarah Gilbert and Carl Wieman
Daniel and Barbara Williams
Prof. and Mrs. Jim and Mitzie Wittliff
Mr. Robert W. Winchar
Carole and John Wooldridk
Ms. Mary Beth Wright
Mr. Michael Wyatt
Ms. Carol R. Yaster
Dr. Allen Young
Dr. Elaine Young
Josh and Allison Zeller
Mr. John Zenit
Mr. Kirby Zicafosse
Mr. and Mrs. William S. Zielinski

Monthly Recurring Members
Mr. Michael Adams-Samson
Ms. Luan Akin
Mrs. Donna Y. Aragona
Ms. JoEllen M. Arnold
Mrs. Margaret Bates
Andrea and Mike Benca
Charlotte and Bill Bialek
Dr. Pamela Blake
Ms. Jill Bodderlj
Mr. Christopher Boisse
Mr. Jerry Boxman
Ms. Debra Bradford
Ms. Marcia H. Branan
Sheri and Robert Bray
Miss Elizabeth R. Brill
Dr. Gretchen Brummel
Mr. Ken Bumman
Irene Cannon-Geary, PhD
Mr. James Carter
Janis and William Catalano
R. M. Chadwick
Ms. Jenni Charrier
Ms. Willow Cheele
Mr. Tim Cliffe
Ms. Cindy Cobb
Mr. David Cohn
Ms. Alison A. Corcoran
Ms. Tawny Corwin
Ms. Pam Cox
Mr. and Mrs. Christopher Daniels
Ms. Deidra Davis
Mrs. Amy Dickinson
Mr. Martin Doudorff
Ms. Denise Duhaime
Ms. Ashley DuVal
Ms. Sandra Egan
Ruth and Jim V. Elder
David and Phyllis Emigh
Diana and Tim Essert
Richard and Joyce Felter
Robin and Carol Fiore
Ms. Marya Fitzgerald
Mrs. Laura Forester
Ms. Marian Fracno
Mr. Richard Fritz
Robert Rowe and Joy Gaddy
Mr. Steve Baron
Ms. Georgia Glacy-Siegel
Mr. Paul Glassner
Mr. Tim Glover
Ms. Michelle Granos
Ms. Helen B. Green
Ms. Adele Gunnarson
Mr. William Hanton

Ms. David Hannan
Dr. Kristine Henderson
Mr. Wade B. Holland
Ms. Anne Holt
Mr. Robin Huff
Mrs. Pamela M. Husing
Mrs. Marlan Isaac
Joel Juarez
Ms. Gretchen Jaeger
Ms. Mary Jamowski
Ms. Mary Ann Joca
Mr. Jared Johnson
Mr. Bryan Jones
J. Kinney and Tyra Kane
Elizabeth Horton and Rita Kester
Mr. and Mrs. William F.
Koerschner III
Mrs. Marlene Korso
Mr. Michael J. Koski
Ms. Diane Lamb
Dr. Fran Lang
Mr. Rhett Lawrence
Dr. Dennis Lawrence
Ms. Alex Levy
Mr. Nick Liberato
Mr. Joseph LaBuglia
Ms. Dorrit Lowson
Mr. Christopher Lynch
Ms. Gail McColl
Mr. Doug Macmillan
Ms. Vaughan C. Maley, Jr.
Ms. Susan Malinowski
Mr. David March
Mr. Dale L. Martin
Ms. Marsha Mastian
Mr. Kevin McCarthy
Ms. Amy McCartney
Mr. David G. McKay
Mr. Matt McRae
Mr. Joseph McVeigh
Ms. Marianne Messina
Ms. Wendy Miller
Ms. Allyn M. Mortimer
Larry and Eileen Moyer
Ms. Susan Mulder
John and Susan
Mr. James Murphy
Mrs. Laura C. Murphy
Dr. Laura Nathanson
Mr. Steven Peno
Ms. Julie Phillips
Mr. and Mrs. Arnold Piontkowski
Mr. Anthony Pintone
Mr. Karen Pope
Ms. Cynthia Powers
Ms. Sarah Pozdell
Ms. Kathleen Prinsket
Ms. Rose Puntillo
Mr. Kent Purdy
Ms. Patti Rankin
Mr. Patrick Reavy
Dr. DeeAnn Reeder
Ms. Susan Reese
Ms. Ashby Remley
Mr. Gabriel Reyes
Mr. Wade Rinehart
Mr. Dave Rizzi
Mr. John Roche
Ms. Karen Rodd
Ms. Tanya Roche
Ms. Rhonda Sanders
Ms. Diane Sanders
Ms. Steve Saylor
Ms. Elnora Scheffler
Mr. and Mrs. Steve
Schildwachter
Ms. Susy Schmitt
Steve and Mary Schneider
Drs. Jonathan Green and Joy Schochet
Mr. Jan Schroeder
Mr. Jane Seagard
Ms. Judith Semple
Mrs. Vanessa Servantes
Mrs. Percy Severn
Ms. Sue Sirkus
Ms. Thomas Skyrd
Mrs. Mary D. Smith
Miss Emily Smith-Miller
Ms. Kerrin Spinnney
Ms. Nancy Stephens
Ms. Amanda Stofan
Ms. Alyssa Streebel
Mr. Christopher Svara
Ms. Ann Taylor
Ms. Bonnie B. Thevenin
Dr. and Mrs. Alan Tipton
Ms. Jaimie Trautman
Dr. Chris Trombly
Dr. Jennifer Tung
Mr. Richard Vaughan
Mrs. Leona Vik
Mrs. Angela Wade
Andrew and Christina Walker
Ms. Michelle Walhagen
Ms. Claire Ward
Ms. Mobi Warren
Ann and Phil Wangenberg
Mr. Mike Watson
Ms. Joan Wattman
Mr. Lee Weiskkatt
Ms. Lynn A. Westberg
Anne and Pat Westin
Mr. Paul Williams
Mr. Gregg Williams
Ms. Robyn Wilson
Mrs. Kimberly Wolf-Dayle
Mr. Matthew Yacobucci
Dr. and Mrs. Larry Yates
Bill Ahlers and Nancy E. Zink

New Legacy Circle Members
Anonymous (1)
Ms. Michele H. Finley
Charles Masson, MD

Estate Gifts
Gerald N. Banta Residual Trust
The Estate of Hans and
Marlis Bruines
batcon.org
The crucial support of federal agencies and their committed employees helps BCI achieve our mission.

Matching Gifts and Workplace Giving

Between Nov. 1, 2014 and March 31, 2015, these businesses and organizations with their employees, have provided a generous base of support to BCI. We appreciate their many contributions through these special matching gift programs.

Thank You For:

<table>
<thead>
<tr>
<th>Matching Gifts</th>
<th>Workplace Giving</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABR, Inc.</td>
<td>Adobe Systems Inc.</td>
</tr>
<tr>
<td>Allied Energy Foundation, Inc.</td>
<td>American Express Co. — Employee Giving Campaign</td>
</tr>
<tr>
<td>America's Charities</td>
<td>AT&amp;T United Way Employee Giving Campaign</td>
</tr>
<tr>
<td>Bank of America</td>
<td>Battelle</td>
</tr>
<tr>
<td>BNY Mellon Community Partnership</td>
<td>Benefivity</td>
</tr>
<tr>
<td>BP Foundation, Inc.</td>
<td>Capital Group Companies</td>
</tr>
<tr>
<td>Chevron Humankind Employees Giving Campaign</td>
<td>City of Seattle</td>
</tr>
<tr>
<td>Constar</td>
<td>Community Shares of Minnesota Campaign Management</td>
</tr>
<tr>
<td>Cuddeback Employee Giving</td>
<td>Doris Duke Charitable Foundation</td>
</tr>
<tr>
<td>EarthShare</td>
<td>EarthShare of Texas</td>
</tr>
<tr>
<td>Employees Charity Organization of Northrop Grumman</td>
<td>FirstGiving</td>
</tr>
<tr>
<td>GE Foundation</td>
<td>GE United Way Campaign</td>
</tr>
<tr>
<td>Goldman, Sachs &amp; Co.</td>
<td>Google</td>
</tr>
<tr>
<td>Grainger Matching Charitable Gifts Program</td>
<td>Halliburton Giving Choices</td>
</tr>
<tr>
<td>Hewlett-Packard Employee Charitable Giving Program</td>
<td>Highfields Capital Management LP</td>
</tr>
<tr>
<td>IBM Corporation — Matching Gifts Program</td>
<td>JustGive.org</td>
</tr>
<tr>
<td>Kaiser Permanente Community Giving Campaign</td>
<td>Levi Strauss Foundation</td>
</tr>
<tr>
<td>Matching Gifts</td>
<td>Mallinckrodt Pharmaceuticals Matching Gift Program</td>
</tr>
<tr>
<td>Maryland Charity Campaign</td>
<td>McKesson Foundation Inc.</td>
</tr>
<tr>
<td>Merck Foundation</td>
<td>MGM Resorts Foundation</td>
</tr>
<tr>
<td>Microsoft Giving Campaign</td>
<td>Moda Health</td>
</tr>
<tr>
<td>National Instruments — NI Gives Annual Campaign</td>
<td>Northeast Utilities Foundation Inc. OSIssoft</td>
</tr>
<tr>
<td>Pacific Gas and Electric Co.</td>
<td>Pearson Matching Gifts Program</td>
</tr>
<tr>
<td>Pfizer Foundation</td>
<td>PG &amp; E Corporation Foundation</td>
</tr>
<tr>
<td>PPG Industries Foundation</td>
<td>Salesforce.com Foundation</td>
</tr>
<tr>
<td>Shell Oil Company Foundation Matching Gifts</td>
<td>Sony Pictures Entertainment</td>
</tr>
<tr>
<td>Tetra Tech, Inc.</td>
<td>Textron Matching Gift Program</td>
</tr>
<tr>
<td>The Boeing Company</td>
<td>The Cambia Employee Giving Campaign</td>
</tr>
<tr>
<td>The Clorox Co. Foundation Employee Giving Campaign</td>
<td>The Ford Foundation Matching Gifts Program</td>
</tr>
<tr>
<td>The Fremont Group Foundation</td>
<td>The Progressive Insurance Foundation</td>
</tr>
<tr>
<td>The Walt Disney Company Foundation Employee Matching Gifts</td>
<td>Thomson Reuters — My Community Program</td>
</tr>
<tr>
<td>Trust</td>
<td>Tyco Electronics Matching Gifts Program</td>
</tr>
<tr>
<td>United Technologies</td>
<td>United Way for Greater Austin</td>
</tr>
<tr>
<td>United Way of Central New Mexico</td>
<td>United Way of New York City</td>
</tr>
<tr>
<td>Verner Foundation</td>
<td>Voya Foundation</td>
</tr>
<tr>
<td>Wells Fargo Community Support Campaign</td>
<td>Williams</td>
</tr>
</tbody>
</table>

Thank You To:

Foundations, Corporations & Public Agencies

Foundations and Corporations are among BCI’s most loyal donors and together with public agencies they provide important investments in bat conservation. We are thankful for their gifts and grants that make our achievements possible, and acknowledge their generous commitments received from Nov. 1, 2014 to March 31, 2015.

$10,000 & Above


$5,000 - $9,999

Anonymous (1) Capital Group Companies Footprint Touring Corp. GE Foundation Highfields Capital Management LP Katz Coffee Lake Superior Zoo Chapter 05/10 Lone Star Riverboat Minnesota Zoo AAZK Chapter Montclair Public Library PayPal Giving Fund Point Defiance AAZK Round It Up America The Boston Foundation Trust

$250 - $999

Anonymous \[2\] Alliant Energy Foundation, Inc. AmazonSmile Bats Northwest BNY Mellon Community Partnership Capital Group Companies Footprint Touring Corp. GE Foundation Highfields Capital Management LP

Public Agencies


DONATE TODAY

To make a tax-deductible donation to BCI, simply visit batcon.org/donate and fill in the requested donation information. For a list of other ways to support bats and BCI, go to batcon.org/waystogive.

Prefer to send a check? Please mail to: Bat Conservation International 500 N. Capital of Texas Hwy., Building 1 Austin, TX 78746

Hats off to federal employees

Every year BCI has the opportunity to work with our U.S. Federal Agencies as partners in bat conservation. Their staffs have not only been superb professional advisors and collaborators, but also generous donors through their workplace-giving program when selecting EarthShare during the Combined Federal Campaign.

BCI has had the privilege of working alongside many employees from the Department of Defense, Department of Agriculture, Department of Energy, and the Department of Interior on military bases, in our National Forests and National Parks, and with the Bureau of Land Management and Fish and Wildlife Service.

From the scientists to the accountants, from the DC offices to the regional teams and the staff at the entrance to America’s public lands—our extended federal family is a strong ally in bat conservation. We wish to give a special "thank you" to these federal agencies and their committed employees, whose support is crucial for BCI to achieve our mission.
Scientists from Bat Conservation International, the Florida Fish and Wildlife Conservation Commission, and the University of Florida have successfully tagged and tracked for the first time the movements of the Florida bonneted bat (*Eumops floridanus*), one of the world’s most endangered bats. Three female Florida bonneted bats were outfitted with new, lightweight GPS trackers supplied by BCI. The trackers, which weigh less than 2 grams each, gathered data for two nights before being retrieved at the end of the study. This was one of the first trials to test the new GPS technology, which has only recently been developed small enough to put on some bat species. This is an exciting step forward for bat conservation as this tool will provide scientists with critical new information about the movement, home range and foraging habitat of the Florida bonneted bat.

Little is known about the habitat and roosting needs of Florida bonneted bats, but scientists are optimistic that using tiny GPS transmitters (inset) to track them will help shed light on the species and aid in research and conservation efforts.
There are many ways to give ... and help bats.

Your support keeps BCI at the forefront of global bat conservation, protecting wildlife habitat and expanding knowledge for the well-being of future generations.

www.batcon.org

CFC# 12064