

batcon.org
**BAT CONSERVATION
INTERNATIONAL**



ANNUAL REPORT
2013 - 2014



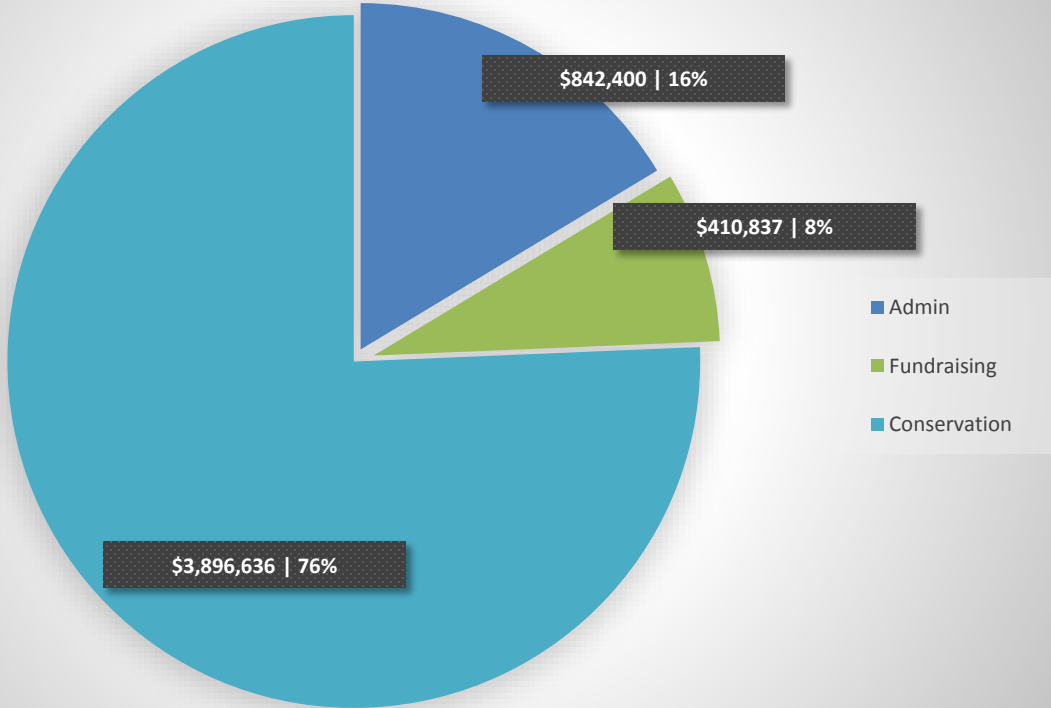
Bat Conservation International, Inc.
Board Members
 August 2014

Director	Joined BCI Board
Cullen Geiselman	2011
Danielle Gustafson	2013
Andrew Marcus	2010
Bettina Mathis	2007
Gary McCracken	2010
John Mitchell	2012
Steve Quarles	2010
Alexander (Sandy) Read	2009
Wes Sechrest	2013
Walter Sedgwick	2006
Susan Wallace	2011
Joe Walston	2012
HONORARY TRUSTEES	
Ms. Sharon R. Forsyth	
Ms. Elizabeth Ames Jones	
Mr. Travis Mathis	
Ms. Wilhelmina Robertson	
Mr. William Scanlon	
Mr. Verne Read, <i>Chairman Emeritus in Memoriam</i>	

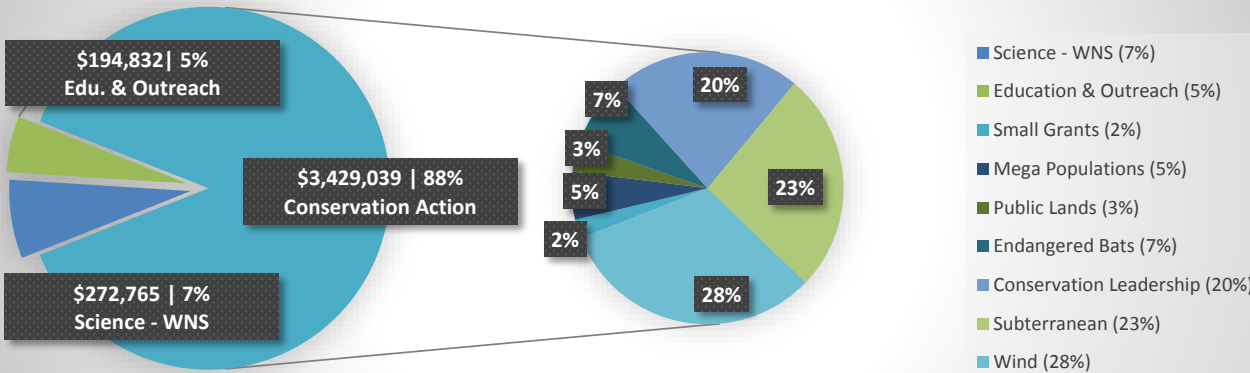
Bat Conservation International, Inc.
Key Personnel
August 2014

Name	Title
Andrew Walker	Executive Director
Joy Gaddy	Senior Director, Operations
Sue Sirkus	Senior Director, Philanthropy
Dave Waldien	Senior Director, Global Conservation
Mylea Bayless	Senior Director, US/Canada Conservation
John Nunn	Director, Information Technology
Amy Price	Director, Grants & Contracts
Jason Corbett	Director, Subterranean Program
Dan Taylor	Director, Public Lands Program
Katie Gillies	Director, Imperiled Species Program
Fran Hutchins	Director, Bracken Cave Preserve
Cris Hein	Director, Wind Energy Program

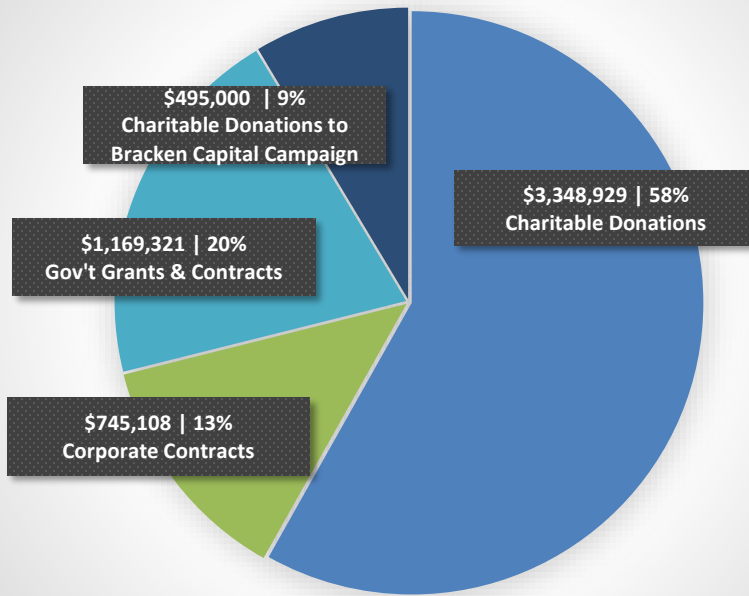
FY14 Operating Expense Breakdown



FY14 Conservation Expense Breakdown



FY14 Operating and Capital Revenue by Source



■ Charitable Donations ■ Corp. Contracts ■ Gov't Grants & Contracts ■ Bracken Capital Campaign

Donor Update

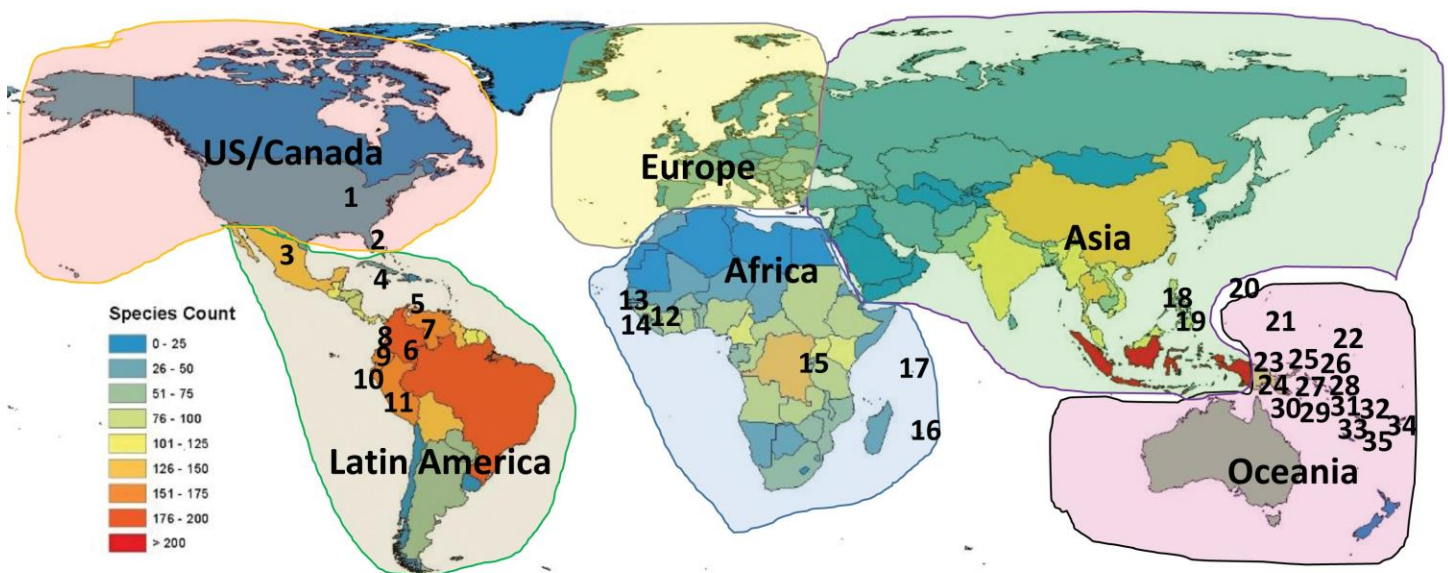
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RECENT ACCOMPLISHMENTS

As we wrap up the fiscal year, we're taking a little time to reflect on BCI's many accomplishments over the last several months. Without your support, our work on behalf of the world's bats simply would not be possible. We feel that the return on your investment is significant, and hope you do, too.

In January of 2014, BCI identified 35 priority bat species from the IUCN Red List of Threatened Species for targeted investment of resources—modeling our approach on the Important Bird Areas and Key Biodiversity Areas models. The priority species are scattered across continents, archipelagos, and island nations, and in collaboration with a broad range of partners, we aim to improve outcomes for each species. In some cases, we will need to focus first on gathering data that addresses gaps in our global bat inventory. For example, several forested areas that are home to species on the priority list have not been surveyed in more than 20 years, if at all. As information gaps are closed, BCI and our partners will employ a variety of strategies, including on-the-ground conservation action to protect priority species and sites.



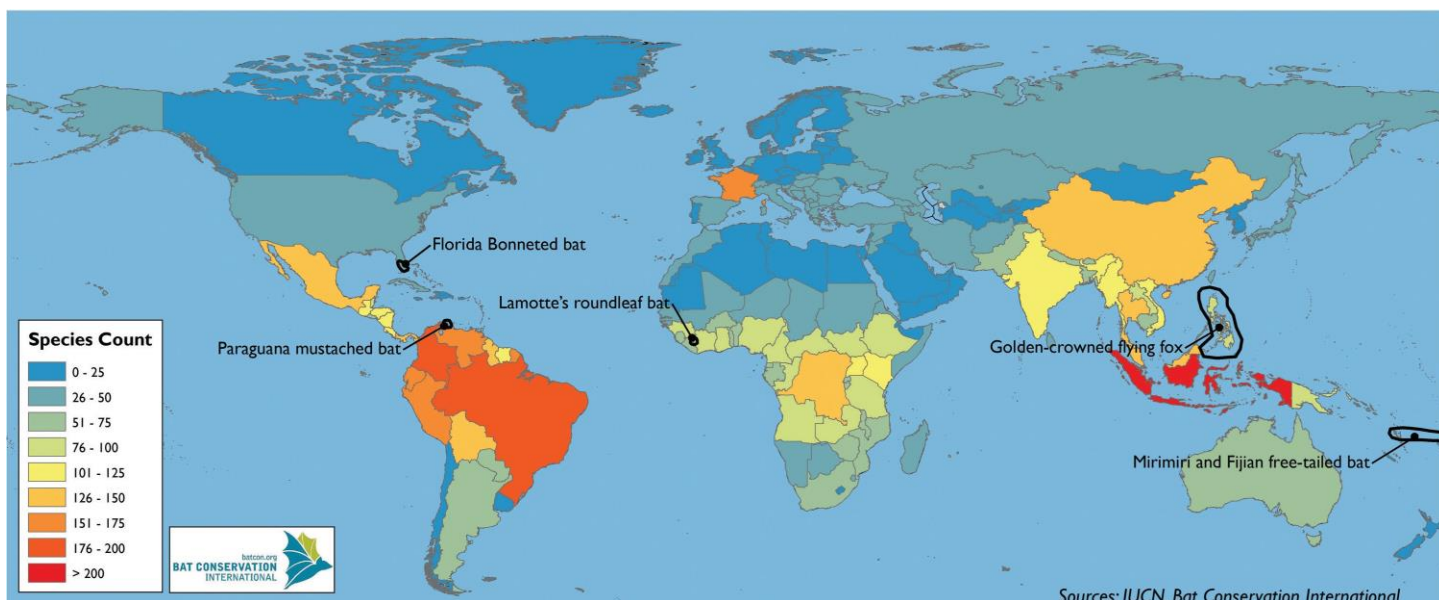
1. Indiana bat (<i>Myotis sodalis</i>) (EN)	2. Florida bonneted bat (<i>Eumops floridanus</i>) (CR)	3. Mexican long-nosed bat (<i>Leptonycteris nivalis</i>) (EN)	4. Jamaican greater funnel-eared bat (<i>Natalus jamaicensis</i>) (CR)	5. Paraguana moustached bat (<i>Pteronotus paraguayensis</i>) (CR)	6. Marinkelle's sword-nosed bat (<i>Lonchorhina marinkellei</i>) (EN)	7. Fernandez's sword-nosed bat (<i>Lonchorhina fernandezi</i>) (EN)
8. Choco broad-nosed bat (<i>Platyrrhinus chocoensis</i>) (EN)	9. Ecuadorian sac-winged bat (<i>Balantiopteryx infusca</i>) (EN)	10. Smokey bat (<i>Amorphochilus schnablii</i>) (EN)	11. Lesser yellow-shouldered bat (<i>Sturnira nana</i>) (EN)	12. Lamotte's roundleaf bat (<i>Hipposideros lamottei</i>) (CR)	13. Maclaud's horseshoe bat (<i>Rhinolophus maclaudi</i>) (EN)	14. Zيام horseshoe bat (<i>Rhinolophus ziam</i>) (EN)
15. Hill's horseshoe bat (<i>Rhinolophus hilli</i>) (CR)	16. Rodrigues flying fox (<i>Pteropus rodricensis</i>) (CR)	17. Seychelles sheath-tailed bat (<i>Coleura seychellensis</i>) (CR)	18. Golden-crowned flying fox (<i>Acerodon jubatus</i>) (EN)	19. Philippine bare-backed fruit bat (<i>Dobsonia chapmani</i>) (CR)	20. Marianas flying fox (<i>Pteropus mariannus</i>) (EN)	21. Chuuk flying fox (<i>Pteropus insularis</i>) (CR)
22. Pacific sheath-tailed bat (<i>Emballonura semicaudata</i>) (EN)	23. Bulmer's fruit bat (<i>Aproteles bulmerae</i>) (CR)	24. New Guinea big-eared bat (<i>Pharotis Imogene</i>) (CR)	25. Bougainville monkey-faced bat (<i>Pteralopex anceps</i>) (EN)	26. Greater monkey-faced bat (<i>Pteralopex flanneryi</i>) (CR)	27. Guadalcanal monkey-faced bat (<i>Pteralopex atrata</i>) (EN)	28. Makira flying fox (<i>Pteropus cognatus</i>) (EN)
29. Montane monkey-faced bat (<i>Pteralopex pulchra</i>) (CR)	30. New Georgia monkey-faced bat (<i>Pteralopex taki</i>) (EN)	31. Temotu flying fox (<i>Pteropus nitendiensis</i>) (EN)	32. Vanikoro flying fox (<i>Pteropus tuberculatus</i>) (CR)	33. Banks flying fox (<i>Pteropus fundatus</i>) (EN)	34. Fijian flying fox (<i>Mirimiri acrodonta</i>) (CR)	35. Fijian free-tailed bat (<i>Tadarida bregullae</i>) (EN)



Growing Global Conservation:

With support from our dedicated members, BCI has awarded 330+ scholarships for projects in 62 countries to promote bat conservation across the world.

As we move into **new regions of the world**, BCI is exploring creative ways to align our capacity building efforts with the needs of local communities. We have begun making progress on conserving six endangered species, including two in Oceania: Fiji's national mammal, the **Fijian flying fox** [Mirimiri], and the **Fijian free-tailed bat**.



In 2014, BCI and partners started conservation planning for six endangered species

BCI'S NEW WORK IN FIJI

Given the incredible biodiversity in this region of the world, you expect BCI's mission would lead us to work in Fiji. In late 2013, Dave Waldien and Andrew Walker traveled to Fiji to attend the Pacific Islands Conference on Nature Conservation and Protected Areas in Suva to learn more about how our Fijian peers are responding to threats that affect bats and ecosystems as a whole. Although we initially thought that BCI's work in Fiji would focus specifically on conservation planning for two endangered species, the Fijian flying fox [Mirimiri], and the Fijian free-tailed bat, our visits with potential partners quickly confirmed that the **Fijian blossom bat**, a species that helps pollinate rainforest plants, is also in decline.

Like the Fijian free-tailed bat, the blossom bat is a cave roosting bat, and when Dave returned to Fiji in April of this year to meet with conservationists and community members, **cave roosts emerged as a priority topic**. In some areas, caves are used as overnight camps or even dumping grounds.



Conservationists from the University of the South Pacific and NatureFiji-MareqetiViti meet BCI's traveling Safari Mickey

Fiji's Island Bats: By the numbers

Known species:	6
Endangered species:	3
Cave bat species:	3
<i>Fijian free-tailed bat</i> -	
Number of maternity roosts in the world:	1
<i>Mirimiri</i> -	
Number of islands known to inhabit:	1

As in many places around the world, perceptions of bats across Fiji vary dramatically and misconceptions linger. Since that trip, BCI has continued building relationships with partners like NatureFiji-MareqetiViti and the Fiji National Trust, and started conservation planning for the Mirimiri and the Fijian free-tailed bat.

Since the world's only confirmed roost of the endangered Fijian free-tailed bat is inside a cave being damaged by logging traffic on the road above the cave, BCI has used what we've learned so far to start raising awareness of the importance of protecting the roost. The goal is to **launch a yearlong effort to map Nakanacagi Cave**, learn more about the Fijian free-tailed bat, and search for other roost sites.



EMERGING PROMISE FOR COMBATting WNS

WNS Snapshot:

- WNS confirmed in 25 states and 5 Canadian provinces
- 7 species positive for the disease
- 5 additional species confirmed for Pd, the fungus that causes WNS
- 1 species removed from “suspected” list due to discovery of false positive

BCI-supported research continues to show promise on several fronts: Fighting the disease and understanding WNS’s impact on agriculture. Researchers—with support from BCI—are finding new ways to intervene in the disease cycle. For example, the naturally occurring bacteria identified by microbiologists at Georgia State University, *Rhodococcus rhodochrous*, is looking more and more like a **viable biological control agent** that will inhibit the growth of the fungus that causes WNS. This winter, live bats were taken into the lab to test for effectiveness and potential side effects. The results are pending, but private conversations with the researchers have suggested that the experiments were successful.

Researchers at Southern Illinois University (SIU) made significant progress in their investigation of how bats impact agricultural pests. The current study, which focuses on corn crops, is the first time this work has been done experimentally in the field. BCI expects to see a peer-reviewed paper further quantifying **the ecosystem services of bats** over the next several months, as the study focuses on the country’s most valuable agricultural product—corn—and preliminary results suggest that the economic importance of bats in agriculture is even more significant than previously estimated. Research such as this provides more incentive for investment in WNS.

Making Wind Energy Work

Building on more than a decade of outreach, research, and deterrent testing, BCI took the first steps toward launching a wind facility certification program in 2014.

Leave a Legacy

BCI is dedicated to the lasting survival of the world’s 1,300+ species of bats. Please help conserve bats for the wellbeing and wonder of future generations by including BCI in your estate plans. Please contact Sue Sirkus at 520-390-5974 for more information. Thank you.

BRACKEN CAVE

In response to the disclosure of a proposed high-density residential development adjacent to the property line at Bracken Cave Preserve, BCI escalated protective measures, which included baseline surveys to document the uniqueness of the cave and surrounding property, and a new security camera, **the Bracken “webcam,”** which enables visitors from all over the world to witness millions of Mexican free-tailed bats in flight via the Internet.

Again this year, **BCI hosted researchers from across the country** eager to learn from Bracken’s many inhabitants and unique features. In early 2014, for example, researchers began a project that uses sonar to “see” into the cave’s guano deposits. The **guano is at least 19 meters deep**, and we’ve not yet hit bottom. Once coring starts,



Mexican free-tailed bats emerge from Bracken Cave

a chemical analysis of the samples will help provide a record of the region’s changing environment caused by weather, agriculture, and industry, along with a host of other details. The data from this guano may give us history going back thousands of years.

Another “first” we’re pleased to share—following winter assessments at Bracken, BCI partnered with Dr. Elizabeth Burba, a researcher out of Oklahoma, to conduct the **first isotope sampling of bat claws of this species**. Results may provide valuable information about movement and migration that could, among other issues, inform WNS management strategies.



Bracken Protection Campaign

As you know, since February 2013, BCI has been fighting the proposed development of 1,520 acres adjacent to our Bracken Cave Preserve in the Texas Hill Country. The development would put 8,000+ people directly under the **nightly three-hour flight of Bracken's bats** and would create the potential for human-bat interactions that would eventually endanger the continued existence of the world's largest colony of bats. Though a solution is not yet in place, the owner of the land has been willing to negotiate with BCI and other parties, and we are cautiously optimistic that a solution will be found. We will keep you closely informed and thank you for all of your support to date.

Have you seen the Bracken webcam? Check out <http://batcon.org/brackenbatcam>

EDUCATING CONSERVATIONISTS OF ALL AGES



BCI's Mylea Bayless introduces young Bracken visitors to bats

Education is the most powerful, cost-effective, and self-sustaining tool we have for ending the persecution of bats. BCI staff and volunteers have hosted guests at Bracken Cave Preserve on a record-setting number of nights this year. **Students, Eagle Scouts, area military and Wounded Warriors, curious members of the public, and news outlets** continue to flock to Bracken to witness the bats in action. As a living laboratory for bat conservation, Bracken provides an incomparable setting for a wildlife adventure; it's like nothing else in the world.

In spite of legal protection, the Philippines' endangered Golden-crowned flying fox is hunted for food and sport. With our partners in the Philippines' three major geographic regions, BCI launched an initiative called *Filipinos for Flying Foxes* to dissuade hunters and farmers from killing bats, and **build support for community-led roost sanctuaries**. We have seen significant progress in our work to date, and during a recent visit, were most excited to hear that IUCN staff agree. In fact, in his summary report, Dr. Tom Brooks, head of the Science and Knowledge Unit with the IUCN, wrote: "Filipinos for Flying Foxes is one of the **best examples that I've ever seen of effective collaboration ... towards threatened species conservation.**"

As part of our ongoing efforts in Zambia, BCI partnered with staff from **Kasanka National Park** and local "bat champions" to help raise awareness of the **estimated 8-12 million fruit bats** that travel from roosts in central, eastern, and southern Africa to the park each year in what is **one of the largest mammal migrations on the planet**. During last year's Bat Season, our partners launched a pride campaign in the park that taught 750 school children and 50 elders from the surrounding communities about the importance of conserving the world's largest colony of straw-colored fruit bats.



Local student bat champions at Kasanka National Park, Zambia



BAT CONSERVATION INTERNATIONAL

Update from program staff

I. Accelerate Scientific Research

Global Bat Database – BCI led a half-day workshop regarding launching our global bat database at NatureServe's 2014 Biodiversity Without Boundaries conference. Through a series of strategic presentations by state Heritage Program Directors, Dr. Luis Aguirre for the Latin American Bat Conservation Network (RELCOM), and Dr. Rick Sherwin as an end-user of the state Heritage Program data, we explored the extent of the management of bat data and how accessible it is to end users. While NatureServe has a large number of records, all Program Directors recognized gaps in the bat data they manage, especially for non-listed species. Only 10 of the 20 RELCOM country programs reported they manage their national bat data and combined, have approximately 90,000 bat records, most of which are not within Nature-Serve's Conservation Data Centers in Latin America. While data are incomplete and scattered, all participants and members of the audience committed to doing more to manage all bat data and find ways to make it available to a global bat database.

Cave and Mine Research: Within our Subterranean Program in the US, we are addressing research questions that impact how we survey for and protect populations of cave and mine roosting bats around the world. Through a collaborative relationship with Northern Arizona University we are involved in three research projects.

- Bats and Uranium Mines project is complete. Results showed high levels of radon present in mines but not in the bats roosting zones during summer months, lower levels of radon were present in mines and roosting areas in winter. Radon dosage rates are higher in the summer when (fortunately) fewer bats roost in the uranium mines and the dosage rates are lower in the winter months when bat use is considerably higher. Recommendations are to continue to gate and maintain uranium mines as roosts. Funding was provided by the BLM.
- In the American west, there continues to be some uncertainty about the behavior of bats after protective gates have been installed at mine entrances. Although gates are a critical tool for protecting roosting bats from disturbance (with the added benefit of protecting people from themselves) their utility is reduced if they have a negative effect on bat behavior and occupancy of a site. We have begun a research project aimed at defining and refining the understanding we have on bat use and acceptance of bat gates in the 4-corners region of the Southwest. Funding is provided by the Bureau of Land Management (BLM).
- And recently, we began a relationship the Institute for Bat Ecology and Genetics (IBEG) to develop a species specific genetically based identification technology. This will allow a low cost identification technique that will be useful for species inventories around the world (at least for subterranean roosting bats) and is a non-invasive method as it is based on guano. This initiative is called Species from Feces (SFF).

Acoustic Deterrents: We continue to research and develop ultrasonic acoustic deterrents as another tool (in addition to operational minimization) to reduce bat fatalities at wind energy facilities. Building on guidelines set forth by a committee of technical experts, we have made a number of advancements in the technology. These include optimizing the design and placement of the devices on wind turbines, improving the weatherization of the devices, and enhancing the output (i.e., frequency and power) to further confuse and disorient bats in the surrounding airspace. We continue to pursue funding opportunities to continue this effort with the goal of conducting an experiment at an operational wind energy facility in summer 2015.

White-nose Syndrome: BCI and the TN Chapter of The Nature Conservancy issued their joint Request for Proposals to fund critical research for the control of the WNS fungus, *Pseudogymnoascus destructans*. We have received 12 proposals that are being internally and externally reviewed for merit. We will decide jointly which projects to fund by June 15.

II. Prevent Extinctions

Asia: In the Philippines, our Filipinos for Flying Foxes is launching community-led roost sanctuaries for the Endangered Golden-crowned flying fox. In northern Luzon, the Mabuwaya team has identified six bat roost sites with colonies in need of protection, double the number we expected to find in northern Luzon. The communities surrounding these colonies have all expressed an interest in supporting bat conservation efforts. In the Visayas Region, the Philippine Bio-

diversity Conservation Foundation, Inc. (PBCFI) team has already gained the backing of two communities who wish to establish community-protected roost site sanctuaries, one of which is in the process of writing up an official ordinance declaring the roost site as a sanctuary. PBCFI has made substantial contributions in capacity building of local conservation managers through training. We have conducted two training workshops focused on building capacity among the protected area managers who will be responsible for patrolling the protected bat roost sanctuaries in both regions where we are working. Overall, our community visits have led to increased interest in flying fox conservation opportunities, and community members have contacted us with additional information about colonies in their provinces with requests for help in protecting them.

Latin America: In Venezuela, BCI is assisting the in-country RELCOM branch and the local leadership team, including CIEZA-UNEFM (research institute), INFALCOSTA (NGO for conservation of the Montecano Biological Reserve), Ministerio de Agricultura y Tierras (government), Ministerio del Ambiente (government), INPARQUES (government), IUTAG (university), la comunidad de San José de Cocodite (local community), and la Fundación Comunitaria Amigos de Montecano (local community foundation) in advocating for the protection of the Paraguana Peninsula as a Biosphere Reserve—this small peninsula is home to the only four known cave roosts for the Critically Endangered Paraguana moustached bat. Additional work is being undertaken to understand extent of the landscape used by this species and to inform the extent of the landscape to include in the biosphere reserve.



Oceania: In Fiji, BCI is launching collaborative initiatives with NatureFiji and the National Trust of Fiji to advance conservation for both the Critically Endangered Fijian free-tailed bat and the Fijian monkey-faced bat (Mirimiri). NatureFiji will be undertaking efforts to work with the communities and the Fijian government to relocate a road for a logging operation which now accesses the logging concession by crossing directly over the only known maternity colony for the Fijian free-tailed bat, which is also the only known roost for the species in Fiji. The road is damaging the cave and has already caused small-scale rock fall and a solution is needed before a catastrophic collapse occurs. We will also work to locate alternate roost sites that can be protected and provide a secure future for the species.

In April, BCI signed its first grant agreement with the Critical Ecosystems Partnership Fund (CEPF) for our new initiative in the East Melanesian Islands. Our initial work on the island of Bougainville, Papua New Guinea, will attempt to locate tree-hollow roosts of the Endangered Bougainville monkey-faced bat and the Critically Endangered greater monkey-faced bat. This initiative will also gauge the willingness of Bougainvillean communities to engage in collaborative conservation for bats.

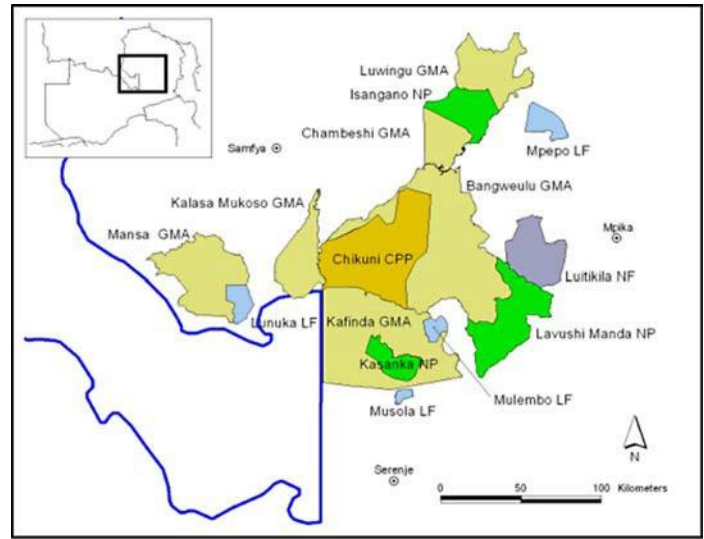
United States/Canada: GREAT NEWS!!! Our efforts to thwart the PA bill HB1576 has been successful! The bill has been pulled from the voting schedule and will not go to the floor for a vote. HB 1576 represents a substantial change in the manner in which threatened and endangered species would have been listed in Pennsylvania by instituting a politically appointed Independent Regulatory Review Commission (IRRC) into the decision-making process that should be based on the best available science. This bill would have been detrimental to threatened and endangered species protection in Pennsylvania and potentially would set an example for other states to consider.

We have identified several priorities for conservation actions benefiting threatened and endangered bat species in the US/Canada region.

- We are partnering with Florida bonneted bat experts, including state and federal biologists, as well as university researchers, to identify and begin implementing priorities to conserve this species. A Florida bonneted bat working group meeting will be held this fall in Florida.
- BCI has been asked to continue assisting the Pennsylvania Game Commission with the development of their statewide Habitat Conservation Plan. Previous work on this project focused on Indiana bats; the initial finding of the Northern long-eared myotis requires revisions to the HCP to include protections for this species.
- We have identified 4 priority roost sites for *Leptonycteris yerbabuena* for conservation actions. Protections of these roost sites will increase securities for this species in the US.

III. Preserve Mega-Populations of Bats

Africa: BCI continues to partner with the Kasanka Trust to ensure the long-term security of the world's largest colony of straw-colored fruit bats, some 8-12 million that are seasonally found within Kasanka National Park, Zambia. The Trust is reducing the pressure on the forest reserve through proactive engagement of local communities in an effort to recruit bat champions within communities that will ensure forest protection. Around 50 "Senior Citizens" visited the park to learn about the bats, other wildlife and the importance of protecting the forest. The groups included many of the village headmen and other influential members of the communities closest to the park, which play an important role in improving protection for the bats and other wildlife inside as well as outside the park. During the Bat Season, 752 kids and 86 teachers from 37 local schools as well 62 kids and 18 teachers from four other Zambian schools participated in a pride campaign at the park, raising attention for the bats, conservation efforts in the local communities, and hopefully help to make many members of the new generation proud ambassadors for conservation.



Kasanka Trust continues its monitoring of the colony and is facilitating a research project by Dr. Jakob Fahr to understand the landscape over which the bats forage on a nightly basis and to identify alternate roosts. The use of GPS transmitters is already providing critical information on distances traveled (60+ km one way) and will inform our development of a landscape conservation strategy for this mega-population.

Latin America: Following BCI's multi-year engagement and support of the RELCOM branch in Colombia, they are set to designate the first of several Important Sites/Areas for Bat Conservation in early June at a community ceremony that will include a workshop on implementation of community-led conservation plans. The sites being designated include cave systems in the Chicamocha Canyon region, which is being considered for protection as a UNESCO Biosphere Reserve for its immense biodiversity (potentially more than 50 bat species) and its ecological uniqueness, and the Macaregua Cave, thought to house Colombia's largest bat population.

United States/Canada: At Bracken Cave Preserve, we are in the final stages of natural resources surveys in preparation for a potential housing development occurring along our southern boundary. We have completed drainage basin delineation analysis of karst features and are evaluating risks associated with the potential development to aquifer recharge and cave ecology. Endangered invertebrate surveys in 4 caves other than Bracken are also currently being completed.

Our efforts to purchase the adjacent property (proposed for development) is continuing. The recently completed property appraisal, funded by The Nature Conservancy (TNC), has placed the value of the property at \$20 million. We expect the results of this appraisal with expedite negotiations with the property owner. BCI has committed to raising between \$5-8 million toward a purchase using a variety other public and private funds including City of San Antonio, Edwards Aquifer Authority, U.S. Fish and Wildlife Service, State and possible TNC contributions. Our fundraising is going well and we have already raised nearly half our commitment in pledged contributions. The city of Garden Ridge, TX (near the property) unanimously passed a resolution to publicly support the efforts to protect Bracken Cave Preserve. The Comal County Commissioners Court passed the same resolution on May 22, 2014. We continue to attract media attention, including multiple articles in the San Antonio Express, New Braunfels Herald-Zeitung, Texas Public Radio, and local TV stations.

We are excited about our 2014 bat flight season starting May 29th. An increase in the number of Member tours to 30, complete with overnight camping and special morning return flights. New this season are public birding tours on two new trails. We are also prioritizing fundraising and decision-maker events throughout the season.

Conservation planning for Texas Hill Country significant bat roosts is underway. We have completed a data base has been completed. Data base contains location and other data about currently known bat roosts in Texas and prioritizes the most important sites for long-term conservation planning. Because 7% of the land in Texas is privately owned future protection of Hill Country bat roosts will rely on creating relationships with landowners that have bat roosts on their property. Relationship building has begun with these landowners.

In Arizona, we are continuing our partnership with Freeport MacMoRan to monitor the colony of *Tadarida brasiliensis* at Eagle Creek Bat Cave. Bats were counted using a FLIR Pathfinder IR light system coupled to a laptop. This compact, man-portable unit allowed for quick deployment and easy set up. Colony size increased from May through

July, peaked in August, and began to taper down as bats left for the fall in September and October. Just a few years ago colony size was estimated at around 50,000 bats. Our data for 2013 shows approximately 1.1 million bats roosting in the cave.

IV. Forge Global and Regional Strategies and Partnerships

In April, BCI (Dave Waldien) attended the Australasian Bat Society (ABS) conference to help mobilize ABS to 1) proactively engage with all stakeholders to more effectively resolve the systematic campaign to disperse urban flying fox camps and 2) to catalyze ABS and its members to proactively engage on the conservation of endangered bats throughout the Pacific Islands. BCI chaired a session on Australia's challenges centered upon government endorsed dispersal of urban flying fox camps including the use of smoke, sirens, water cannons and, in some cases lethal measures. ABS has reconfirmed its flying fox committee, added new leadership and has given them a directive to proactively work with community and state governments to develop a comprehensive solution to the urban flying fox issue. Key meetings have already been convened with the Mayor, Vice-Mayor and City Council to establish a ground-breaking model where bat advocates and city government work together establish a livable plan for the city to live with a flying fox camp. BCI will establish periodic communications to help maintain this new commitment to action. BCI has also confirmed at least nine ABS members that are or will be proactively working in the Pacific Islands, specifically in Papua New Guinea, Solomon Islands, New Caledonia, and Fiji. Our next steps will be to evaluate if and how these individuals could be engaged in our priorities and where their technical skills are needed.

Following the trip to Australia, Dave returned to Fiji to build upon our initial meetings in Fiji in December 2013. Following a series of meetings with key organizations, we have confirmed our core conservation team including NatureFiji, University of the South Pacific, and the National Trust of Fiji to advance conservation programming for the Critically Endangered Fijian monkey-faced bat and the Fijian free-tailed bat. We have engaged colleagues from Australia that will bring additional technical expertise for our priority bats. To address the broader pressures facing bat conservation in Fiji (deforestation, cave disturbance, and hunting) and to take advantage of a small colony of Tongan flying foxes being protected on the Presidential compound, we are also developing a national pride campaign. Our connection with the National Trust of Fiji is crucial as they are actively working with the president on conservation projects and believes the president will be an engaged advocate for collaborative bat conservation. Through the pride campaign, we anticipate engaging communities and the government in our conservation efforts and be able to collate leads on significant bat roosts to inform our on the ground actions. By working through NatureFiji, our bat conservation actions will directly connect with Fiji's National Biodiversity Strategies and Action Plan (NBSAP), which is the principal instrument for implementing Article 6 of the Convention on Biological Diversity at the national level.



V. Address Threats Impacting Multiple Species at Multiple Sites

NEW U.S. Public Lands Initiative: The Development of BCI's Public Lands Program and the scaling-up of the Water for Wildlife Project got off to an excellent start in 2014 with the signing of a five-year BCI- USDI Bureau of Land Management agreement to work on a suite of national land management policies and guidelines to improve bat conservation on the 257 million acres managed by the BLM. Fifty thousand dollars was designated for the initial year of the agreement and \$100,000 requested for federal FY2015. Project Director Dan Taylor also met with the staff of 16 House Representatives and two Senators as part of the Association of Fish and Wildlife Agency's Washington D.C. Fly-in to advocate for bat, WNS, and other non-game wildlife appropriations. Under our USFS National Agreement (signed in August) Taylor provided extensive review and comments for improving management standards for bats during the Coconino and Coronado National Forests' Forest Plan revision process, two of the most bat-diverse national Forests in the U.S. Similar input was provided for the Bureau of Land Management's San Pedro Riparian National Conservation Area and Kansas-Oklahoma-Texas Resource Management Plans. We are also providing information, in an effort led by Katie Gillies, to a Rapid Ecological Assessment (REA) for the Southern Great Plains LCC (SCP LCC) for the Bureau of Land Management. This REA will inform management and decisions within the SGP LCC for the next decade.

Taylor continued to promote awareness of BCI's Public Lands Program and new 5-Year Strategic Plan through submitted and invited presentations to the Arizona and New Mexico Chapter of The Wildlife Society and the Region 3

Forest Service's Annual Biologist meeting, reaching more than 75 wildlife biologists responsible for the management of wildlife on more than 10,000,000 acres of public lands.

White-nose Syndrome: In addition to serving on multiple teams addressing WNS response, Katie Gillies is serving on the steering committee to for a joint meeting of the US regional bat working groups in St. Louis in 2015. This meeting will further ongoing efforts to formalize a North American Bat Conservation Partnership. She has also authored our comments on a Preliminary Environmental Assessment from the Colorado Bureau of Land Management. This EA outlines an adaptive management strategy for when WNS arrives in Colorado and can be used as a template in other western states in the future.

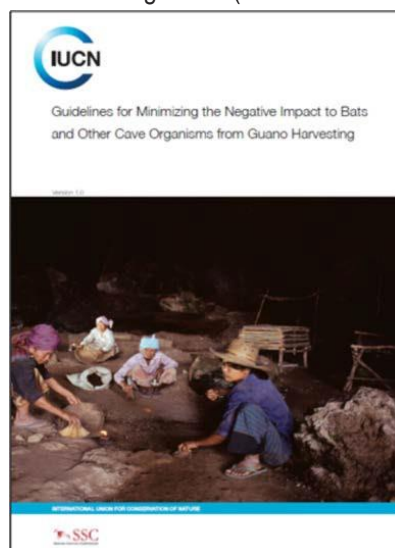
Bats and Wind: In order to encourage bat conservation within the wind industry and associated stakeholders (consultants, agencies etc.) we are promoting robust research protocols and strategies for reducing bat fatalities through multiple avenues primarily within the US, but increasing in other countries.

- We organized our 2nd Bats and Wind Energy Workshop in Portland, ME and focused on issues related to the federally endangered Indiana bat and the soon to be listed as federally endangered northern long-eared bat. Participants included representatives from the wind industry, biological consultants, state and federal agencies, and non-profit organizations.
- We are assisting a number of countries with their development of wind energy and wildlife guidelines. We have reviewed several drafts of South Africa's pre-construction and post-construction guidelines. We also have been invited to attend workshops in Panama and Chile to work on similar documents.
- We were invited to speak at the American Wind & Wildlife Institute's Technology Innovation Workshop, where we discussed the need for advances in technologies to help resolve bat/wind turbine interactions. We also continue to promote minimization strategies for bats at wind energy facilities and presented the results of BCI-led studies at several meetings including the AWEA Siting Conference, Midwest Bat Working Group Annual Meeting, and the U.S. Fish & Wildlife Service's final wind energy webcast.

We are also continuing to develop a certification program for wind facilities that will provide financial incentives for implementing voluntary bat conservation practices and avoiding high risk areas for bats. We met with representatives from Salmon-Safe and LEED building certification programs to better understand the challenges and opportunities of developing a voluntary certification program and market-based incentives. Our next steps involve reaching out to other stakeholders (for example wildlife agencies) and others in the industry (powerpurchasers, investors etc).

Subterranean Program: Understanding where key bat roost exist on the landscape is the first step to conserving the most critical roosts and, in the American West where bats roost in mines, providing guidance for closing dangerous mines for human health and safety. Through our partnership with the Bureau of Land Management (who administers more public land – over 245 million surface acres – than any other Federal agency in the United States), the US Forest Service and the Department of Defense, we have surveyed over 300 mine and cave features in 2014. We have identified roosts for 10 species of bats in 6 states and have recommended a strategies for bat-friendly closures at the most significant sites. In addition to our inventory and assessment work, we have been facilitating installation of bat gates at key sites through our national service agreement with the BLM.

Guano Mining Guidelines: In 2011, BCI initiated a collaborative volunteer project with the Emerging Wildlife Conservation Leaders (EWCL) group to develop a set of guano mining guidelines to reduce the negative impacts of mining. Following field testing in Cambodia in 2012 and with guidance from a multinational advisory team, these guidelines were reviewed by the IUCN Species Survival Commission and formally adopted April 2014. These guidelines will be used to inform guano mining operations that currently threaten major bat caves around the world, many of which may qualify as mega-population sites.



VI. Education and Outreach

Connecting Farmers and Ranchers to Bat Conservation: Across the world, cultivating a conservation ethic in local communities and landowners will be necessary for the long-term protection of bat populations. In the US we are partnering with the Natural Resources Conservation Service to generate a series of training tools for bat conservation on private lands.

This spring, we reached out to NRCS biologists and conservationists in 8 states, and engaged EQIP-eligible agricultural producers (and partners) in 3 states. We are building our database of contacts so that we can begin to assess which topics and types of materials will be most useful to private landowners, and exploring how to market our “best practice” resources so that they reach NRCS staff, as well as agricultural producers. In addition, we are talking directly to landowners through regional events including the South Texas Farm and Ranch Show, the American Grassfed Livestock Association, the Chiricahua Leopard Frog Meetings and the 64th Annual San Antonio Stock Show and Rodeo. We are developing a set of best practices for bat conservation on private lands and an associated webinar series to promote them with landowners.

Bats and Disease: Understanding the risks and realities of living with bats is another key component of developing that same community conservation ethic. We continue to invest resources in communicating information about bats and rabies, with an emphasis in communities surrounding key bat areas such as central Texas. We were invited by TX Dept. of State Health Services and TX Agrilife Extension to present at a seminar in San Antonio entitled “Living Among Bats and Avoiding Rabies Risks” in April and presented “Living Safely Among Bats” to San Antonio Urban Wildlife Conference where over 150 Master Naturalists, bat exclusion experts and animal control officers were in attendance.

Local TX Outreach: Finally, we believe that generating a sense of wonder and excitement about bats in the next generation will shift the community perception and lead to long term conservation.

- We are collaborating with Wildlife Acoustics on an education product combining their newest bat detector and BCI’s “Discover Bats” curriculum, which was presented as a package at TCEA TX (Computer Education Association) in February, and NSTA (National Science Teachers Association) in Boston in April.
- We are preparing for a new season of public outreach at the Congress Avenue Bridge and other TX bat viewing sites. We have completed our volunteer training program for 2014 Bridge Docents and provided training to the TPWD volunteers that serve as naturalists at the Old Tunnel State Park.
- We were represented at April Earth Day festivals in both Houston and Dallas, with attendance of, respectively, 15,000 and 57,000 visitors (the Dallas event, now called Earth Day Texas, was a two-day festival—billed as “the world’s largest Earth Day event.”)

VII. Invest in Tomorrow’s Conservation Leaders

(Bob Locke Reporting)

Scholarships: Supporting and nurturing young scientists is a powerful tool for expanding global bat conservation into the future. It also pays off handsomely in pioneering research around the world. Since 1990, BCI’s Student Research Scholarship program has awarded 371 scholarships totaling \$982,581 for scientific studies in 63 countries. We received 89 qualified applications for the 2014-5 academic year. Of those, 37 were submitted to a panel of scientists for review. We awarded 18 scholarships for research in 10 countries and 4 U.S. states for a total of \$52,740. Continued financial support from U.S. Forest Service International Programs and the Leo Model Foundation has been invaluable to this program.



2013 BCIScholar Bol a Anong Alima Giberling of Cameroon shows college students how to measure and record bat data.

Global Grassroots: Unusually sparse funding this fiscal year limited the Global Grassroots Conservation Fund to three grants – in Serbia, Cameroon and Nigeria – for a total of \$8,000. Over the past 14 years, this program has provided 104 small grants (at an average award of \$2,538) for projects in 53 countries. Though the awards modest, their impact is magnified by tapping the enthusiasm and commitment of local people applying their own solutions to local problems. Self-sustaining bat-conservation communities exist today in such countries as Nepal, Ukraine, Colombia and Kenya at least partly because of seeds planted by Global Grassroots.

Dramatically increasing funding for both Scholarships and Global Grassroots are priorities under our 5-year Strategic Plan as both programs are being realigned to reflect these long-range goals.

Scholarships and Grants:

We congratulate the winners of the 2014 BCI Student Research Scholarships and gratefully recognize the generous donors whose support made them possible:

U.S. Forest Service International Programs:

Cara Brook (Princeton University, United States): Bushmeat harvesting impacts on population dynamics and corresponding risk for henipavirus spillover in Malagasy fruit bats, Madagascar

Hannah Frank (Stanford University, United States): Investigating the effect of habitat change on disease risk in bats, Costa Rica

Melquisedec Gamba-Rios (University of Tennessee, United States): Anti-predation strategies of tent-making bats, Costa Rica

Cristian Kraker (El Colegio de la Frontera Sur, Mexico): Effects of landscape composition and configuration on aerial insectivorous bat species richness and relative activity, Mexico

Willy Pineda Lizano (Instituto Tecnológico de Costa Rica): diversity, spatial and temporal patterns of bat communities in a tropical altitudinal gradient in Costa Rica

Ricardo Rocha (University of Lisbon, Portugal): Spatio-temporal dynamics of the impacts of forest fragmentation upon phyllostomid bats: consequences of fragment re-isolation, Brazil

Julie Shapiro (University of Florida, United States): Bats in a Mosaic Landscape: The effects of land-use on pest control by bats, Swaziland

Grace Smarsh (Texas A&M University, United States): Usage of song in acoustic monitoring of an East African bat, Tanzania

Maripaula Valdes Berriz (National Autonomous University of Mexico): Dispersal of *Brosimum alicastrum* seeds by tent-building bats and its relation to germination and seedling survival in the Lacandon Forest, Mexico

Leo Model Foundation:

Devaughn Fraser (University of California at Los Angeles, United States): Implications of landscape-level insecticide use for bat health, dietary diversity and biological pest control

Anna Doty (University of New England, Australia): The effects of wild and prescribed fires on ecophysiology, ecology and behavior of microbats, Australia

Kim Ferguson (Universität Bremen, Germany): Bat emergence and return timing with prey interactions at experimentally illuminated sites, Netherlands

Mennon Environmental Foundation:

Jelena Burazerovic (University of Belgrade, Serbia) A survey of cave-dwelling bats in karst regions in Serbia

Erin Adams (Angelo State University, United States): Seasonal and daily activity patterns of the endangered Mexican long-nosed bat (*Leptonycteris nivalis*) in Texas, United States.

Amanda Bailey (University of Florida, United States): Closing data gaps for the Florida bonneted bat (*Eumops floridanus*), United States

Alyson Brokaw (Humboldt State University, United States): Bat Speak: Assessing the use of social calls to attract bats to artificial roost sites, United States

Elissa Olimpi (University of California at Santa Cruz, United States): Bat diversity and foraging ecology in an agricultural matrix, United States

Amanda Williams (University of Colorado at Boulder, United States) Growing, Growing, Gone: Do agriculture systems help or hinder insectivorous bat populations?

Global Grassroots Grants:

Current Projects receiving funding from BCI's Global Grassroots Conservation Fund include:

2014

Serbia (Jelena Burazerovic, University of Belgrade)

Educating the new generation of bat conservationists and promoting bat conservation in Serbia

Cameroon (Hilary Ewang Ngide, CCREAD Cameroon)

Indigenous campaign against unsustainable bat hunting in the Bakossi forest community of Cameroon

Nigeria (Iroko Tanshi)

Predicting roost choice in cave dwelling bats and preserving cave bat communities by local community conservation education

2013

Nepal (Pushpa Raj Acharya, Prince of Songka University)

First national flying fox (*Pteropus giganteus*) survey in Nepal to assess their habitat status, population size and dietary food plants

Pakistan (Muhammad Mahmood-ul-Hassan, University of Agriculture, Pakistan)

Establishing the distribution and diversity of the bats of Pakistan, and allaying public misperceptions of threatened bat species

India (K. R. Senacha)

Status survey and conservation education campaign: A community participation approach to protect bats in Rajasthan part of the Thar Desert, India

Kenya (Paul Webala, Karatina University College)

The population ecology, diet and movement of straw-coloured fruit bats (*Eidolon helvum*) in western Kenya.

Ghana (Edem Ekpe, University of Central Florida)

Promoting the conservation of the roosts of the straw-colored fruit bat on the islands of the Volta Lake in Ghana

Tanzania (William Nambiza, Tanzania Forest Conservation Group)

Ecological role of frugivorous bats on the Island of Bats in Lindi, Tanzania, to the surrounding fragmented forest

Democratic Republic of Congo (Prince Kaleme, Centre de Recherches en Sciences Naturelles)

Raising awareness for bat conservation in the eastern DR Congo: a case of one forest reserve and three municipalities in the mountainous Kivu.

Bangladesh (Nurul Islam, Chittagong Veterinary and Animal Sciences University)

Community Bat Education in Bangladesh Beneficia Foundation

(This grant was made possible by John M. Roberts and Leonard C. Keifer)