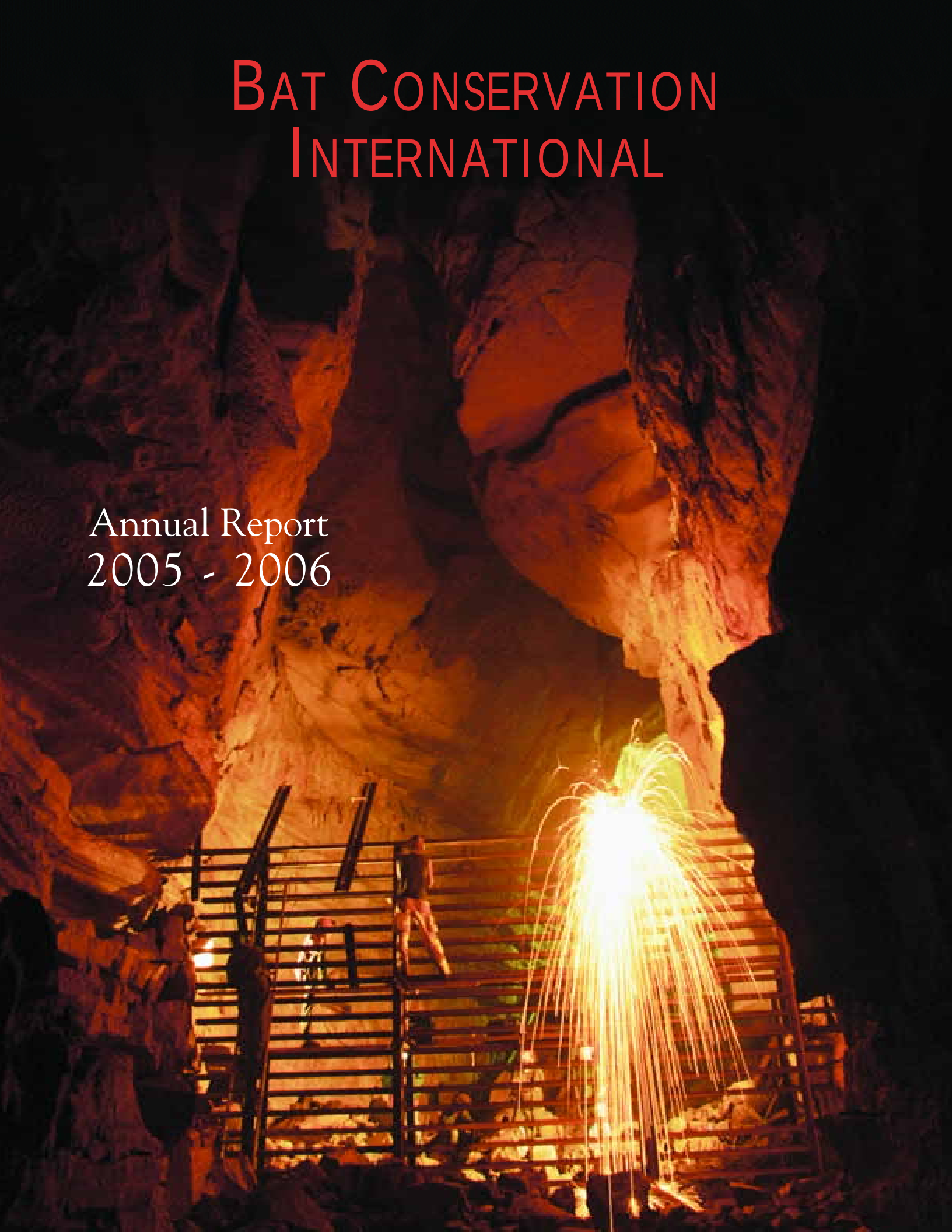
Bat Conservation International



Annual Report
2005 - 2006

Dear BCI members and friends,

Old myths die hard. Bat Conservation International has achieved great success in educating an often-hostile public about bats around the world. Yet baseless suspicions linger, and news media are too often willing to pile devastating speculations atop frail, untested hypotheses that are presented as facts. We still must fight new versions of the same myths that led to BCI's founding 24 years ago.

The most persistent and destructive misinformation involves bats and public health. This past year saw a novel variation on the long-standing exaggerations about bats and rabies: Bats were blamed for fearsome viral diseases from Ebola to SARS.

Virologists published papers reporting that antibodies to disease-related viruses were found in bats. Exactly what that meant remained unclear, since antibodies were also found in humans and other animals. Nevertheless, news headlines declared bats to be a "Potent Threat to Global Health."

BCI investigated these claims carefully – and found them wanting. Antibodies to one virus were isolated in members of a captive colony of flying foxes in Australia, but their human caretakers were unaffected even after years of close contact. A SARS-*like* virus (not the SARS that infects humans) was found in horseshoe bats in Asia, and the bat version could not be grown in cultures that support human SARS. Although Ebola antibodies were mostly found in primates and dogs, and transmission of the disease has been documented from primates to humans – but not from bats – bats have been speculated to be the source of the disease.

We reported what we found in *BATS* magazine (Spring 2006), formally responded (with other leading bat biologists) to scientific journals that carried the initial speculation and described our findings to news media. History shows that such myths can be devastating, leading to the intentional, needless destruction of huge numbers of bats.

Those of us dedicated to conserving these gentle and invaluable allies must remain constantly alert to misinformation and be prepared to counter it with facts. Together, we are making the world a safer place for bats – and all humanity will benefit.

Merlin D. Tuttle
Founder and
President

John D. Mitchell
Chairperson
Board of Trustees

Bat Conservation International

Cover photo: Volunteers built a huge new gate at Hubbards Cave in Tennessee, a vital hibernation site for endangered gray myotis. It replaced an early gate that was, when erected at BCI's urging in 1985, the largest bat gate ever built.

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BORDERLANDS

Protecting America's migrating bats

Bats pay no heed to international borders. Many vital species travel between Mexico and the United States along the trail of migrating insects and the nectar-rich blossoms of agave and cacti. Only an international effort can conserve these border-jumping bats – and that is the goal of Bat Conservation International's Borderlands Initiative.

Last year, the Initiative, undertaken with partners in Mexico, launched the first systematic field research to document the status, threats and conservation needs of bats in six states of northern Mexico. Eighty-seven current and past bat roosts, mostly in caves, were identified and surveyed.

Guano deposits and roost stains indicate these caves once supported more than 40 million bats of at least 17 species. Fewer than half that number remain today. Six of the 19 major roosts were empty, for a loss of some 15 million bats at just those sites.

Cave-dwelling bats throughout the region are severely threatened. And many of them, including Mexican free-tailed bats (*Tadarida brasiliensis*), as well as the endangered lesser and Mexican long-nosed bats (*Leptonycteris yerbabuenae* and *L. nivalis*), spend about half of each year in the United States.

Even as our research details the breadth of the problem, the Borderlands Initiative is working toward solutions. Education at all levels provides much of the foundation on which long-term conservation can be built.

Copies of BCI's Spanish-language *Murciélagos Cavernícolas del Norte de México* (Cave-Dwelling Bats of Northern Mexico), published in early 2005, were distributed to 550 owners and managers of key bat roosts and to educators on both sides of the border. At six caves harboring up to 5.9 million bats, vegetation and fallen trees that were obstructing entrances were promptly removed.

The guano in many bat caves is mined for fertilizer. Borderlands teams, led by Program Coordinator Amulfo Moreno, typically found receptive audiences for information on sustainable guano extraction that protects the roosts and limits mining to seasons when bats are least harmed.

One success story involved a series of abandoned tunnels, once used in dam construction, in Tamaulipas, Mexico. Hundreds of thousands of bats were found using the tunnels. Officials feared the bats, however, and had closed several tunnels, killing many thousands of bats that were trapped inside.

Moreno promptly contacted Francisco Franco, regional inspector for the Mexican National Water Commission, and explained the values of the bats and their need for the tunnel roosts. Franco became an enthusiastic partner with BCI, agreeing to protect the tunnels as bat sanctuaries for at least eight species.

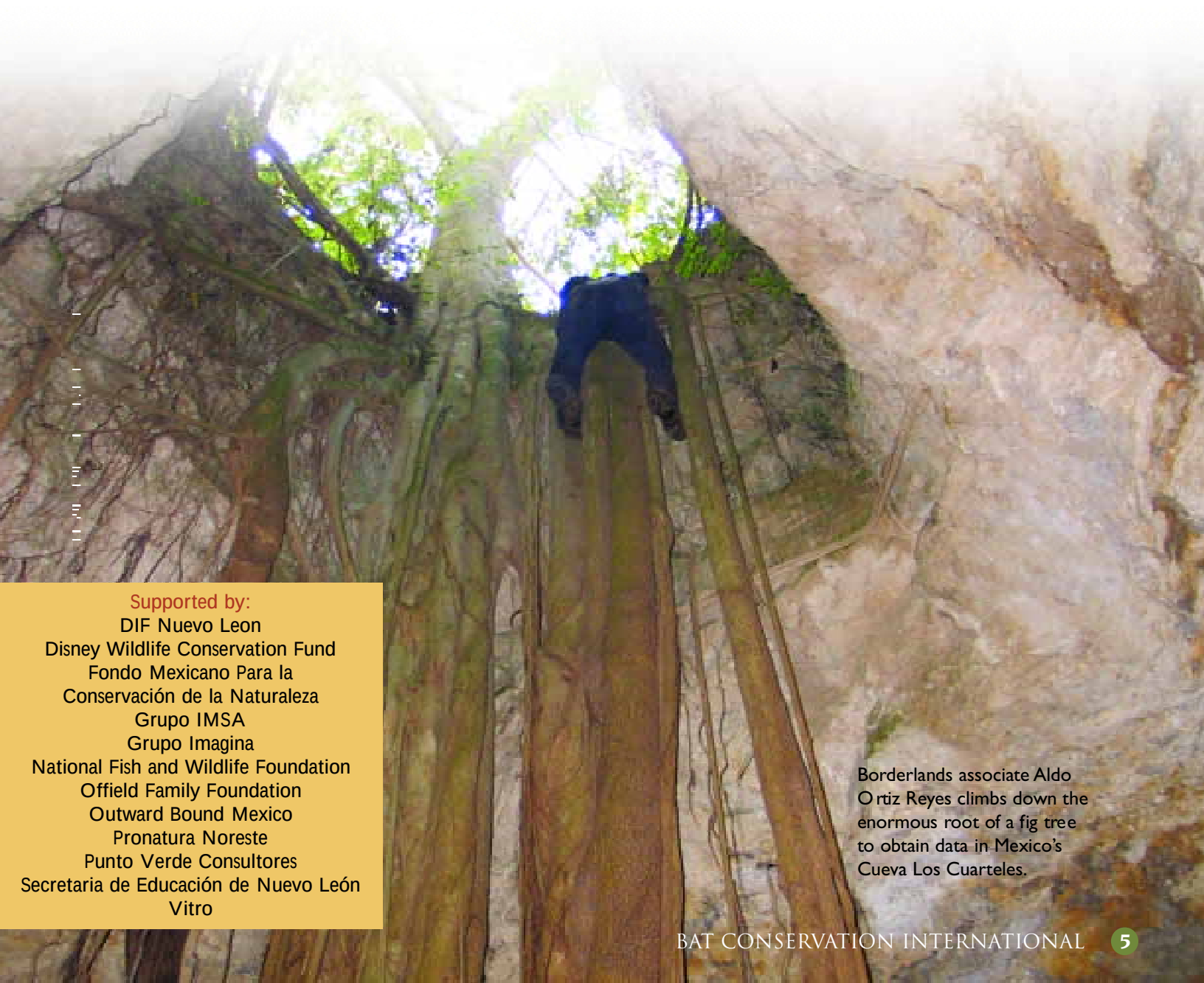
BCI Borderlands Project Coordinator Arnulfo Moreno (*above*) discusses the characteristics of a captive bat during a workshop for professionals in Mexico.

When Moreno learned that abandoned tunnels (*such as the one at left*) were being shut down in Tamaulipas, specifically to destroy or drive off the bats that used them, he began educating key regional officials. Now a growing number of tunnels are protected as bat sanctuaries.

Moreno and his team presented frequent lectures and workshops for educators, government officials, landowners and community leaders throughout northern Mexico, including a series of presentations to 600 educators, a training session at the Mexican Zoology Society Conference and a bat-house workshop in collaboration with Monterrey Tech.

BCI is also working with specialists such as Punto Verde Consultores and Proyecto Bio-regional de Educación Ambiental, A.C., to train teachers in bringing bat education into their classrooms. In Nuevo León, staff members of Outward Bound Mexico and Grupo Imagina, after training by Punto Verde, ran bat-education workshops and other activities for 750 junior high students.

Education programs will be expanding through the coming year as the Borderlands Initiative develops the first strategically targeted bat-conservation plan for the region. Now that we have identified these bat caves, protecting even a few of the most important ones will contribute greatly to the repopulation and long-term conservation of bats in northern Mexico and the United States.



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Outward Bound Mexico
Pronatura Noreste
Punto Verde Consultores
Secretaria de Educación de Nuevo León
Vitro

Borderlands associate Aldo Ortiz Reyes climbs down the enormous root of a fig tree to obtain data in Mexico's Cueva Los Cuarteles.

Bats & Wind Energy

Using science to prevent bat kills

Supported by:
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PPM Energy
Verne and Marion Read Family
Rhode Island Renewable Energy Fund
Dr. Carolyn Rizza
Courtney and Erik Sikora
Ann Smith
TRF – Sustainable Development Fund

After documenting the now-undeniable threat that wind-energy turbines pose to North American bats, scientists with the BCI-led Bats and Wind Energy Cooperative (BWEC) spent much of the past year exploring potential solutions to this lethal problem.

BWEC is an alliance of state and federal agencies, private industry, universities and non-government organizations organized in 2004 to find ways to prevent the thousands of bat kills documented at wind farms around the United States.

Our team conducted extensive studies this past year at the locations of proposed wind farms in Pennsylvania and Wisconsin. Bat detectors were deployed at various heights to record bat calls at the sites of planned turbines. Acoustic monitoring will resume when the wind turbines are built and operational. Acoustic data will also be correlated with meteorological conditions, topography and habitat.

Comparing pre- and post-construction bat-activity levels and bat kills will help researchers learn how to predict bat kills before wind facilities are built. It could also reveal whether the wind turbines themselves alter bat activity.

A "boom truck" was needed to mount a movable bat detector on a tower to survey bat activity before construction of a planned wind farm.

Meanwhile, Joe Szewczak of California's Humboldt State University is working with the Cooperative to develop an acoustic deterrent device that broadcasts intense ultrasonic signals. The notion is to keep bats at a distance through signals that humans cannot hear. Such devices are being tested with captive big brown bats at the University of Maryland and will soon be taken into bat-rich habitat to determine whether the broadcasts will drive bats away from areas they normally use for feeding and drinking.

If initial tests are promising, more sophisticated versions of the deterrent will be developed and could be field-tested at working turbines in 2007.

Wind energy remains a major concern for bat and bird conservation, but BCI and the Bats and Wind Energy Cooperative are working to make it a more wildlife-friendly alternative.

Our research data and patient negotiations paid off this past year as BCI and eight other major conservation organizations joined in a consensus statement urging potential wind-energy investors to favor firms that are demonstrating a commitment to resolve the wildlife problems associated with wind farms.

Dr. Joe Szewczak of Humboldt State University (*kneeling*) explains his study of ultrasound emissions from wind turbines to Greg Johnson of Western Ecosystems Technology (*left*) and John Goodell, a city administrator for Kimball, Nebraska.

Water for Wildlife A safe place to drink

Watering tanks for livestock offer critical sources of water for bats, birds and other wildlife throughout arid and semiarid reaches of the American West. As natural water holes fall victim to drought and development, these stock tanks often are key to survival.

But research by BCI's Water for Wildlife program and its partners finds that many of these tanks can be death traps for bats, which must swoop down to drink on the wing. More than half of 370 surveyed water features in seven states had barbed wire, wooden structures, metal bracing or other obstructions erected over the water. Such barriers deny bats access to the water or send them tumbling into it. Only 10 percent of the tanks had escape ramps to prevent downed bats or birds from drowning.

A pallid bat scrambles up an escape ramp during tests in Arizona.

Water for Wildlife, with a growing list of state, federal and private partners, is working to determine how to make livestock watering devices more safely accessible to wildlife. We also are designing and testing more effective escape ramps.

Project Coordinator Dan Taylor, working with university and government scientists in three states, analyzed more than 50 years of research data and conducted field experiments to find solutions. Three different escape-ramp designs were also tested, and 900 hours of mist-netting results were analyzed to determine the minimum water-trough size required by different bat species.

Education is critical. Taylor and Water for Wildlife partners are conducting workshops, presenting data at wildlife and range-management conferences and conducting interviews with news media. A series of collaborative workshops is planned during the coming year – with the first two in Arizona – to demonstrate how livestock tanks can be made safer and more accessible for bats and other wildlife. Workshop participants will build hundreds of wildlife escape ramps for installation in tanks on public and private rangelands.

A primary goal of the Water for Wildlife program is publication of a rangeland-management manual based on the program's extensive research. The handbook, to be completed in the coming year, will educate landowners and managers on the best methods for enhancing wildlife access and safety at livestock watering tanks and the necessity for doing so.

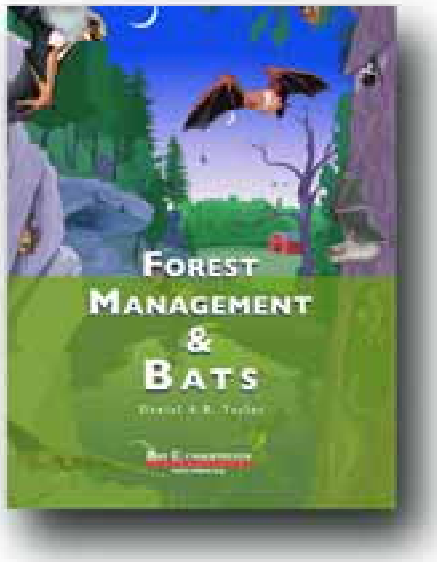
Supported by:
National Fish and Wildlife Foundation
Offield Family Foundation
USDA Natural Resources Conservation Service
U.S. Bureau of Land Management

Bats & Forests

More than half of all non-industrial forests in the United States are privately owned, and these landowners can play a crucial role in conserving America's wildlife. To give them the management tools needed to reach that potential, Bat Conservation International, in partnership with the USDA-Natural Resources Conservation Service, produced and published *Forest Management & Bats*.

This publication, the first aimed specifically at owners of small woodlots, demonstrates that good stewardship can increase the health and productivity of forests while preserving and enhancing habitat for bats. Well-documented and clearly written by BCI Bats and Forests Coordinator Dan Taylor, *Forest Management & Bats* provides detailed information on integrating bat conservation into efficient forestry practices.

More than 14,000 copies were distributed to county, state, federal and private forestry offices nationwide, and requests for hundreds of additional copies began almost immediately.



Supported by:
National Fish and Wildlife Foundation
USDA Natural Resources
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Bracken Bat Cave & Nature Reserve

Supported by:
The Brown Foundation
SeaWorld and Busch Gardens Conservation Fund
Steves Family Foundation
USDA Natural Resources Conservation Service

The oak-studded grasslands that once enticed Native Americans, then ranchers and farmers to Central Texas are being restored, slowly and carefully, at the Bracken Bat Cave & Nature Reserve.

The fabled cave, summer home to the largest bat colony on Earth, is at the very edge of suburban San Antonio. The surrounding 696 acres of Hill Country land, now owned and protected by BCI, had been transformed by decades of overgrazing and fire suppression. Cedars invaded the savannas, displacing native grasses and other plants.

BCI contracted with The Nature Conservancy of Texas to prepare a comprehensive habitat-management plan in partnership with Texas Parks and Wildlife and the USDA's Natural Resources Conservation Service. The goal is to restore native plants to a more natural Hill Country landscape.

Invasive cedars are being thinned in historic savanna areas, while thickets are preserved in appropriate locations. The resulting mosaic will benefit a variety of native wildlife, including endangered golden-cheeked warblers and black-capped vireos.

The initial phase of cedar thinning – by hand and machine – has been completed on 163 acres. Controlled burns will help restore native species and maximize diversity. The burns have been delayed, first by unseasonal rains and then by extended drought. If the weather cooperates, the first burn will take place in the coming year, followed by a second cutting of cedar that will be left on the ground to protect seedlings from deer.

We have begun mapping critical resources in preparation for a system of nature trails so visitors can fully appreciate the region's wildlife and rugged beauty. The University of Texas School of Biological Sciences is conducting long-term research to study the effects of our restoration efforts on biodiversity.

These ambitious efforts were made possible in large part by the generosity of BCI members and friends who donated through our Charter Land Steward Adopt-an-Acre program.

Restoring the land is but the first step toward our goal of creating an environmentally gentle education and research center through which BCI can safely share with the public the unforgettable sight of 20 million Mexican free-tailed bats emerging each summer evening from Bracken Bat Cave. Experiencing that natural wonder will change attitudes about bats and conservation as never before.

A crew wielding chain saws (*upper left*) thins invasive cedars as part of BCI's program to restore the Bracken Nature Reserve as much as possible to pre-civilization conditions. (*Left*) Each year, hundreds of our members witness the awesome emergence of 20 million bats from Bracken Cave.

Charter Land Stewards

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Johnnie Bedrich
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Caves Hope for endangered species

In 1985, an enormous bat gate was erected to protect the fast-declining population of endangered gray myotis (*Myotis grisescens*) that hibernated in Tennessee's Hubbards Cave. BCI Founder Merlin Tuttle had discovered some 250,000 of the bats deep in the cave 15 years earlier. By the time the gate went up, barely 88,000 gray myotis remained.

The gate, 30 feet (9 meters) tall and 35 feet (10.5 meters) wide, was built with the urging and assistance of Tuttle and Bob Currie of the U.S. Fish and Wildlife Service. The Nature Conservancy of Tennessee, which bought the cave in 1984, organized the massive project, and dozens of cavers volunteered to do the backbreaking work.

The population rebounded, albeit slowly, for years. BCI's 2002 census found about 156,700 gray myotis in Hubbards Cave. That number had jumped an astonishing 232 percent – to an estimated 520,326 – by January 2006.

But the huge gate by then was showing its age. So in May 2006, The Nature Conservancy, with advice and on-site assistance from BCI and caver-volunteers from five states, tore down the old gate and built a new one using more modern design and construction features. Master gate-builder Roy Powers of the American Cave Conservation Association supervised construction of both gates. The new gate, located 50 feet (15 meters) deeper into the cave, is about 25 feet (7.5 meters) high and 35 feet (10.5 meters) wide. The important and rapidly expanding population of endangered bats will remain well-protected for decades to come.

The BCI Caves Program also is continuing and expanding its Appalachian Saltpeter Caves Project, a vital effort to reverse the declining numbers of endangered Indiana myotis (*Myotis sodalis*). Extensive BCI research demonstrates that the decline is mostly due to human disturbance and inappropriate temperatures at hibernation caves where entrances and passages have been altered. A key step in saving these bats is finding and restoring caves that were important hibernation sites until alterations changed airflow and temperatures.

The Saltpeter Caves Project is using an innovative strategy to search out those caves. Saltpeter was a primary component of gunpowder until the late 1800s, and bat guano is a rich source of saltpeter. So caves that had large bat populations were often tapped by saltpeter miners, who typically cut passages and shafts to ease their labors.

The project is surveying caves known, by name or local history, as saltpeter caves, as well as other potential bat caves. In the first phase, BCI teams examined 28 caves in Kentucky, historic home to some of the largest populations of Indiana myotis. Roost stains suggest some of these caves once held hundreds of thousands, even millions, of hibernating Indiana myotis and other bats. A single site – Barefoot Pit Cave in Wayne County – appears to have once sheltered more than half a million hibernating bats, mostly Indiana myotis. However, only 600 Indiana myotis were found there last year.

Restoring even a few of these once-thriving hibernacula could have a huge impact on recovery of the species. Planning, gaining landowner permission and undertaking such restorations are the next challenges. The surveys, which continue in Kentucky, are also moving into Indiana. Other states will be added as opportunities and funding permit.

The historic, bat-friendly gate at Hubbards Cave in Tennessee, one of the most important hibernation sites for endangered gray myotis, was replaced with a more modern design (*below*). Researchers with BCI's Appalachian Saltpeter Caves Project (*left*) examine Payne Cave in Kentucky for evidence of past use by bats.

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Supported by:
American Cave Conservation Assn.
Illinois Conservation Foundation
Indiana Cave Survey
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The Bat House Project New options for homeless bats

Many bats roost in old, hollow trees or under the loose, peeling bark of dead trees. Such trees are disappearing from North American forests, however, so BCI is developing and testing artificial roosts to house these displaced bats. BCI's Bat House Project is working with a variety of partners to perfect innovative alternatives for species that don't use traditional bat houses.

Rafinesque's big-eared bats, like these roosting in a dilapidated cabin, are among prime users of tower-style artificial roosts.

Better and less-expensive versions of the "artificial tree" roosts, first tested in August 2000, are achieving consistent success for Rafinesque's big-eared bats (*Corynorhinus rafinesquii*) in southeastern states. Twenty-two of these tower roosts, the most recent built of cinder block, have been installed in six states (Florida, Georgia, Kentucky, Mississippi, North Carolina and Texas), and 20 have been occupied. Last year, a roost in Texas attracted a colony of females and pups that had moved from a building where the pups had been born.

Intensive monitoring and experimentation continue as we improve this very promising artificial roost. We are also exploring its use in western states to house displaced Townsend's big-eared bats (*Corynorhinus townsendii*).

(*Above left*) Cinder-block towers provide roosts for bats that typically use large, hollow trees, which are in increasingly short supply. (*Above right*) Artificial bark is being tested as summer roosts for Indiana myotis in Kentucky's Mammoth Caves National Park.

Since some bat species roost beneath loose bark on snags, BCI and several partners have been exploring the promise of artificial bark as an alternative to increasingly rare natural snags. Partnering with Mammoth Caves National Park, we installed 60 artificial bark roosts at this Kentucky national park as summer roosts for endangered Indiana myotis (*Myotis sodalis*). The "bark," made of reinforced fiber, is wrapped partly around tree trunks, secured with screws and caulked along the top. The sites are being monitored to gauge success.

The refocused Project is still working with traditional bat-house users and builders, of course, and also promoting bat-friendly modifications and designs for bridges. But as more and more bats of all kinds lose their natural habitat, the need for innovative alternative roosts becomes ever more critical.

Supported by:
Magnolia Charitable Trust
Mammoth Caves National Park
Trinity River National Wildlife Refuge

North American Bat Conservation Fund

The North American Bat Conservation Fund supports wide-ranging bat research in the United States, Canada and Mexico. Through grants of up to $5,000 each, the NABCF has, since it was created in 1998 as part of the North American Bat Conservation Partnership, funded 102 projects in 31 U.S. states, 6 Mexican states and 2 Canadian provinces. Our investment of $350,595 helped researchers obtain additional matching financial support from other sources for total research efforts of $3.25 million.

NABCF projects in 2005 – a total of $14,000 in awards – featured development of "The Bat Grid," a systematic program for monitoring bat species diversity and population trends in the Pacific Northwest; gating the Pitney Butte Mine to protect a colony of Townsend's big-eared bats (*Corynorhinus townsendii*) in Washington; and a study of tree roosts in Mississippi hardwood forests. Current projects are under way in Jalisco, Mexico; British Columbia, Canada; and New Jersey, United States.

Researchers analyze a bat call recorded during "Bat Grid" research in Oregon.

Supported by:
Robin Boyer
Helen Johnson

Bats & Mines Preserving sanctuaries of last resort

Millions of bats, their traditional roosts lost to encroaching cities, tourists and commerce, seek sanctuary in abandoned mines throughout North America. BCI and its partners have gained protection for a large proportion of America's most important bat roosts in mines. But others are still being sealed every year because of safety and liability concerns. Identifying and preserving appropriate mines, often with bat-friendly gates, remains a major conservation challenge.

BCI's Bats & Mines Program Coordinator Dave Waldien, working with industry, state and federal partners, helped survey some 30 abandoned mines in California and Nevada during the past year for past or current use by bats.

The program is developing a growing network of key private and government partners throughout the West to identify, protect and manage mines of importance to bats.

During the past year, BCI leveraged more than $97,000 to install 11 bat-friendly gates at six especially important abandoned mines in Arizona, Nevada and California to protect significant colonies of California leaf-nosed bats (*Macrotus californicus*), Yuma myotis (*Myotis yumanensis*) and cave myotis (*Myotis velifer*).

The program continued its educational tradition by co-sponsoring a mine-gating workshop for 22 participants at the Southern Belle and Aeroplane Mines near Bishop, California. Partners included the California Department of Conservation, the U.S. Bureau of Land Management's Bishop office and Inyo National Forest. Such workshops further expand the growing pool of mining, conservation and government professionals with the basic skills to build appropriate bat gates.

At the Quincy Mine National Historic Landmark District in Michigan, BCI worked with the nonprofit Quincy Mine Hoist Association, Inc., to develop and build a unique educational kiosk at the tourist destination that now draws some 40,000 visitors a year.

The exhibit tells the story of the mine, the bats that hibernate there, the gate that protects them and BCI's role in protecting mine-using bats throughout the Great Lakes region.

Mine-gating workshops cosponsored by BCI provide hands-on training. Participants (*below*) are at work on what became the finished gate (*right*) at a mine near Bishop, California.

Supported by:
Arizona Game & Fish Department
California Dept. of Conservation
Christopher Newport University
Leon C. Hauser
The Hulebak-Rodricks Foundation
Tillie Page Laird
Mine Safety Appliances
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Bridge Bats

Winning urban friends

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Education Programs Supported by:
Austin American-Statesman
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Roadway Productions

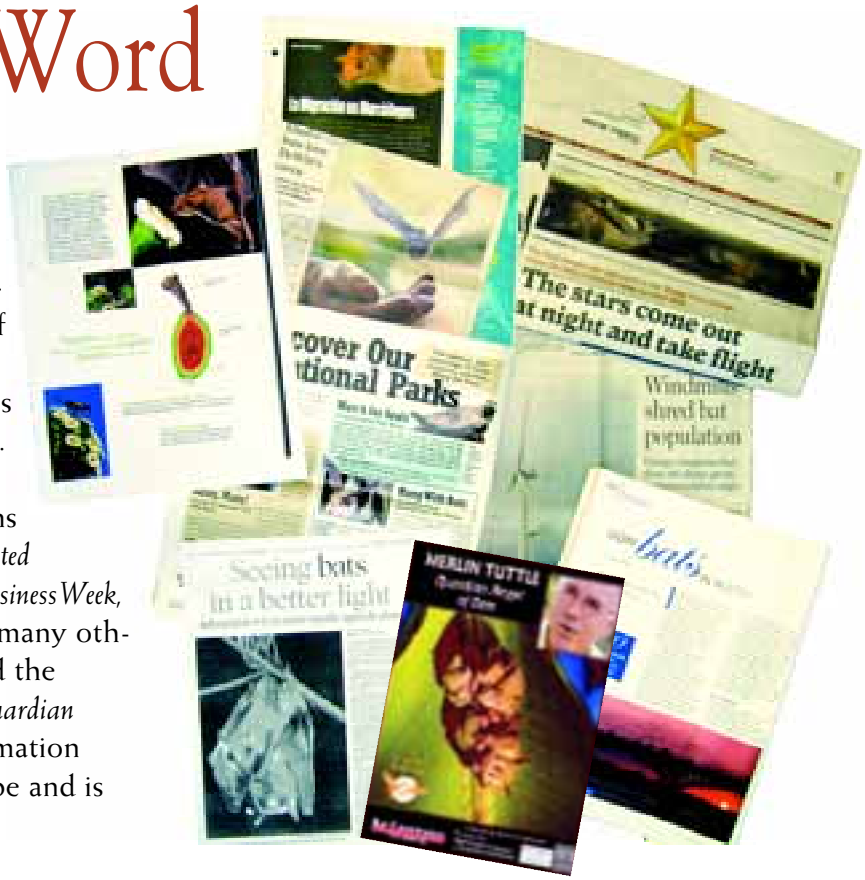
The 1½ million bats that spend summers in crevices beneath the Congress Avenue Bridge in downtown Austin, Texas, are a boon to local tourism and an exceptional tool for teaching people worldwide to appreciate bats. An estimated 135,000 people visit the bridge each year to watch the bats' emergences, making this an outstanding resource in combatting the myth that bats are dangerous.

BCI was there on weekends, distributing educational literature, answering questions and explaining the bats' invaluable contributions to the environment and the economy. This past year, BCI cosponsored the Bat Fest, which drew 35,000 people to the bridge over two days of live music, bat educational displays and, of course, bat watching. Planned as an annual event, BCI received part of Bat Fest proceeds.

Other cities are now beginning to promote their urban bat colonies, often with advice from BCI. In Texas, the 250,000 bats at Houston's Waugh Drive Bridge are beginning to draw crowds. And more than 500,000 bats at the McNeil Bridge north of Austin are beginning to get considerable attention, although viewing areas are scarce.

Spurred by BCI's Bats and Bridges program, bridges around the United States and elsewhere are also being designed to accommodate bats, usually with roosting crevices designed through BCI's Bats & Bridges research project.

Spreading the Word



One of Bat Conservation International's most vital roles is working to improve the accuracy of news media depictions of bats. A single newspaper or television story can help dispel damaging myths for thousands, even millions of people. BCI's reputation for accuracy and integrity makes it a mandatory call for journalists at countless national and local media when bats are in the news. Founder Merlin Tuttle and Science Officer Barbara French were cited last year in dozens of publications and broadcasts, including *The New York Times*, *Associated Press*, *Reuters*, *National Geographic Explorer*, *CBS-TV*, *Business Week*, *Baltimore Sun*, *Christian Science Monitor*, *Denver Post* and many others. The Public Television Group of France featured the career of Dr. Tuttle and BCI in the documentary *Guardian Angel of Bats*. Filled with dramatic footage and information about bats, the film was televised throughout Europe and is available (in English) from BCI.

BCI Field Workshops

Hands-on lessons in conservation

Supported by:
Bass Foundation Endowment
Helen Johnson
Schuetz Family Trust
Wallace Research Foundation

BCI's annual field workshops have an immense, long-term impact on bat conservation. The 1,098 graduates of the intense, five-day sessions since 1993 include biologists; educators; managers of forests, mines and caves; professors; research scientists; military personnel and civilian employees; consultants; engineers; conservationists; lawyers; veterinarians; ranchers; virologists; and hundreds of representatives of state and federal agencies. They have taken a wealth of new knowledge about bats and bat habitats home to all U.S. states, as well as 20 nations from Australia to Taiwan.

Workshop graduates are leading bat conservation and research efforts around the world. The experience has led many professional biologists to make bats a major – often central – focus of their subsequent careers.

Four Bat Conservation and Management Workshops in the summer of 2005 (two in Arizona and two in Pennsylvania) trained 63 participants from 22 states and four countries. The sessions featured classroom lectures by experienced biologists, as well as field trips that described bats' habitats and their contributions to the environment (*photos at right and above*). Participants also spent evenings capturing bats in mist nets (*top right*) and harp traps and learning to identify as many as 18 bat species.

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Scholarships A path to the future

The future of bat conservation worldwide rests largely in the hands and minds of today's students. BCI has been supporting these future leaders of bat research and conservation since 1990 through its Student Research Scholarship program. We have invested $480,114 in scholarships that helped 216 graduate students conduct important research in 51 countries, money that generated, through matching funds from other sources, a total of more than $3.3 million in research. BCI Scholars have advanced knowledge about bats and bat habitats on every continent except Antarctica, and many already fill leadership roles in science and conservation.

The 2005 awards went to 13 students working in 10 countries. Radek Lučan of the University of South Bohemia (*installing a datalogger in the bottom-right photo*) studied the specific characteristics of tree roosts used by bats and their implications for forest management in the Czech Republic. In Mexico, Miguel Munguía Rosas of the Instituto de Ecología documented the critical role that bats, which pollinate at least 590 tropical and subtropical plants in the Americas, play in maintaining the health and diversity of cacti. (*An assistant examines a captured bat in the photo at upper right*). Scott Cardiff of Columbia University (*searching for bats along an underground river, bottom left*) examined relationships between the characteristics of caves and the diversity of bats that use them in Madagascar, identifying caves in most critical need of protection. Sandra Peters of the University of Western Ontario (*removing a bat from a mist net, upper left*) went to Brazil to study how bats survive in rainforest regions amid slash-and-burn agriculture, exotic tree plantations and other disturbances. Other BCI scholars worked in Malaysia, Myanmar, New Zealand, Norway and Peru and in the U.S. states of Arizona and Michigan.

Supported by:
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COURTESY OF RUDEK LUCAN

Global Grassroots Conservation Fund

Supporting homegrown enthusiasm

In the past six years, the Global Grassroots Conservation Fund has sown the seeds of bat conservation from Bangladesh and Bulgaria to Uganda and Venezuela. The BCI program has awarded 56 modest grants to local groups and individuals in 30 countries, including eight projects funded in the past year. The grants average just $2,600 each, but the impacts are magnified tremendously by the enthusiasm, commitment and ingenuity of local recipients.

In Madagascar, two conservation groups trained and dispatched teams to remote grade schools to teach the many values of flying foxes to teachers and conduct a wonderfully popular poster-drawing contest for children (*bottom photo*). A young biologist in Nepal conducted the first bat-diversity study and examined local opinions about bats (*upper right photo*) in the species-rich Pokhara Valley. The Center for Tropical Conservation Studies used its grant to educate students, form school environmental clubs and theater groups and (*lower left*) survey bat species on Negros Islands in The Philippines. In Romania (*upper left*), platoons of children, after bat-education classes, donned bat costumes and took to the streets to educate their elders. Many of those seeds are already bearing fruit.

COURTESY OF SUJAS PHUYAL

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COMBINED STATEMENT OF FINANCIAL POSITION

BAT CONSERVATION INTERNATIONAL, INC.
As of May 31, 2006 (with summarized financial information as of May 31, 2005)

	May 31, 2006	May 31, 2005
ASSETS:		
Current Assets:		
Cash and Cash Equivalents	$1,040,824	$1,142,187
Marketable Securities at Fair Value	263,103	85,297
Trade Accounts Receivable	23,579	40,129
Grants and Pledges Receivable	662,814	439,850
Inventory	69,412	84,394
Deferred Expenses	228	2,578
Total Current Assets	$2,059,960	$1,794,435
Closely-Held Stock	102,315	102,315
Property, Plant and Equipment, net of accumulated depreciation of $572,154 and $526,125	497,847	432,098
Real Property (Bat Habitat), net of accumulated depreciation of $38,257 and $15,870	1,739,447	1,745,587
Permanently Restricted Assets – Marketable Securities at Fair Value	579,566	579,566
Total Assets	$4,979,135	$4,654,001
LIABILITIES AND NET ASSETS		
Current Liabilities:		
Trade Accounts Payable	$17,479	$78,343
Grants Payable	28,539	21,343
Accrued Expenses	146,970	48,723
Deferred Revenues	18,341	17,412
Advance Deposits and Prepaid Rent	64,027	34,247
Total Current Liabilities	$275,356	$200,068
Net Assets:		
Unrestricted:		
Invested in Property and Equipment	2,237,294	2,177,685
Designated for Operating Reserve	249,345	-
Designated for Endowment Purposes	261,685	-
Undesignated	44,276	449,031
Total Unrestricted Net Assets	$2,792,600	$2,626,716
Temporarily Restricted Net Assets	1,331,613	1,247,651
Permanently Restricted Net Assets	579,566	579,566
Total Net Assets	$4,703,779	$4,453,933
TOTAL LIABILITIES AND NET ASSETS	$4,979,135	$4,654,001

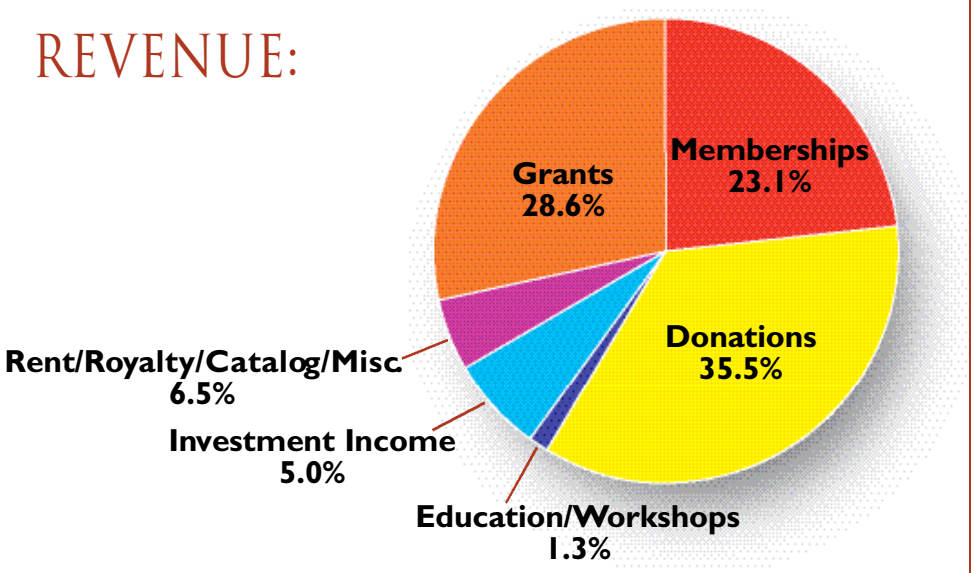
COMBINED STATEMENT OF ACTIVITIES

BAT CONSERVATION INTERNATIONAL, INC.
For the Year Ended May 31, 2006 (with summarized financial information for the year ended May 31, 2005)

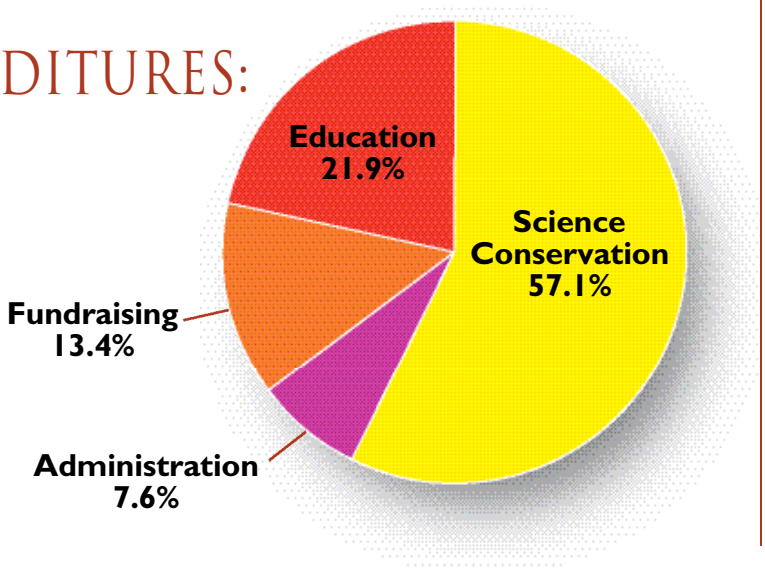
	Unrestricted	Temporarily Restricted	Permanently Restricted	May 31, 2006 Total	May 31, 2005 Total
PUBLIC SUPPORT AND REVENUE:					
Grants	$273,500	$ 633,464	–	$ 906,964	$605,520
Memberships	730,217	–	–	730,217	758,757
Donations	804,960	319,000	–	1,123,960	899,272
Catalog sales, net of costs of $189,571 and $220,599	12,484	–	–	12,484	(3,398)
Investment Income, net	157,069	–	–	157,069	87,000
Miscellaneous Income	36,782	99,778	–	136,560	88,308
Education/Workshops Income	40,819	–	–	40,819	123,528
Rental Income	44,408	–	–	44,408	42,934
Royalty Income	13,337	–	–	13,337	11,328
Net Assets Released from Restrictions – Restrictions satisfied by payments	968,280	(968,280)	–	–	–
Total Public Support and Revenue	**$3,081,856**	**$83,962**	**–**	**$3,165,818**	**$2,613,249**
EXPENSES:					
Program Services:					
Education	638,506	–	–	638,506	538,733
Science and Conservation	1,666,382	–	–	1,666,382	1,495,120
Total Program Expenses	$2,304,888	–	–	$2,304,888	$2,033,853
Supporting Services:					
Administrative	221,594	–	–	221,594	203,934
Fund Raising	389,490	–	–	389,490	250,098
Total Supporting Services	$611,084	–	–	$611,084	$454,032
Total Expenses	$2,915,972	–	–	$2,915,972	$2,487,885
INCREASE (DECREASE) IN NET ASSETS	$165,884	$83,962	–	$249,846	$125,364
Net Assets at Beginning of Year	2,626,716	1,247,651	579,566	4,453,933	4,328,569
Net Assets at End of Year	$2,792,600	$1,331,613	$579,566	$4,703,779	$4,453,933

Complete, audited financials are available by writing to BCI at PO Box 162603 • Austin, TX 78716

REVENUE:



EXPENDITURES:



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The Year Ahead

Bat Conservation International achieved outstanding progress on many fronts over the past year, as documented in this report. But enormous challenges to bat conservation remain. Throughout our history, we repeatedly have overcome such roadblocks by building a solid scientific foundation and counting on the dedication and generosity of our members and friends. We are confident that, with your support in this coming year, we will expand our achievements on behalf of bats and the habitats that depend on them. Two issues are especially critical.

Time is running out to resolve the urgent problem of bat kills at wind-energy farms. Research over wide geographic areas has now documented beyond any doubt that wind turbines pose lethal threats to bats (*page 6*). The whirling turbine blades are already killing bats by the thousands every year. Without prompt action, the toll will soon rise into the tens of thousands as planned wind-energy facilities are activated around the country.

BCI and the Bats and Wind Energy Cooperative are developing promising solutions that should prove cost-effective, but they must be rigorously tested. Industry cooperation has been mixed: While some firms are supporting our efforts, others remain opposed. Too often, even major conservation organizations offer virtually unqualified endorsements of wind energy, with little regard to bat or bird kills. These fatalities can be minimized, but only to the extent that there is broad public concern and cooperation from government and industry. We must get the word out, even as we continue our research. The penalty for failing could be devastating.

Public education has always been a major part of our mission, and BCI's Bracken Bat Cave provides an unsurpassed educational tool (*page 8*). But lacking adequate facilities at the site, we are forced – for the protection of the world's largest bat colony – to limit access to BCI members and only on designated nights. The experience of watching 20 million bats emerge in a churning vortex from this cave, with great columns visible for miles, can profoundly alter attitudes about bats and nature.

Our dream is to create a world-class education and research center near the cave and provide environmentally sound viewing facilities so this wonder of nature can be shared with the world. It is a slow and expensive effort, but it must – and will – be done correctly. The bats, the land and other wildlife will be protected. Success will vastly improve the cause of bat conservation. Many members are supporting this effort through our Charter Land Steward Adopt-an-Acre program and others with direct donations and grants. Your help in creating the Bracken Bat Cave & Nature Reserve will pay huge dividends for generations to come.

To support these or other Bat Conservation International projects, please contact BCI's Development Department at *development@batcon.org* or (512) 327-9721.