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Filling the Void

The global challenges facing bat conservation

Paul Racey

This article is based on Paul Racey's presentation, "Bat Conservation: Past, Present and Future," at the 15th International Bat Research Conference at Prague, Czech Republic, in August 2010.

As we begin the International Year of the Bat (2011-12), we justifiably celebrate our many successes in bat conservation during the past 30 years or so. Vigorous organizations, government agencies and universities, along with countless dedicated individuals, are now advancing bat research and conservation in many countries around the world.

But our work has only begun: Roughly half the landmass of the world remains mostly a bat-conservation void. That includes almost all of Africa, the Middle East, the former Russian republics of Asia, most of the Russian Federation and most of Asia: China, Tibet and Mongolia. So in addition to marking our accomplishments, we must also acknowledge the challenge that lies before us and plan the task of filling this void.


Bats in these areas rarely enjoy any effective protection and they face a litany of perils: deforestation and habitat loss, cave disturbance, hunting for bushmeat, urbanization, outright vandalism and more. Building a constituency for bats is hampered by a lack of understanding of their benefits, as well as dangerous myths grounded in traditional folklore and often embellished by modern media.

Some international conservation groups, including BCI, support varied bat-conservation efforts within this void. Such individual projects often seem dwarfed within so vast a landscape. But they can plant seeds of conservation that, with support, nurturing and patience, can grow into sustainable programs. They point to initial paths toward meeting the challenge of global bat conservation. Success cannot be imposed from outside, although it can certainly be encouraged and supported. Conservation for the future grows from within each country and region.

Capacity building is essential. In many countries within today's void, a few dedicated individuals struggle "often virtually alone" to win a place for bat conservation. Consider Erik Bakwo fils, a graduate student in the central African nation of Cameroon. He contacted BCI's Student Research Scholarship program for help in the first study of fruit bats' ecological and economical value in southern Cameroon. Besides a lack of funds, however, Bakwo fils had no one to offer advice and guidance; neither his university nor his country had a single bat specialist. At BCI's request, I offered advice throughout his study, which was supported by two BCI scholarships. Bakwo fils' research was impressive. But a critical mass of such individuals is needed before the next crucial steps can be taken "the creation of a self-sustaining conservation organization and local bat-conservation projects.

Training and nurturing young scientists and conservationists is one of the most powerful approaches to building new bat-centered organizations, especially in the developing world



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where initial funding is often a daunting problem.

BCI's scholarships have been especially important in nurturing young bat scientists and supporting research in regions where interest in bats is rare. In many developing countries, this is one of very few funding sources that can help students earn a master's degree, often an essential first step to a career in bat conservation. Since 1990, BCI has awarded 291 scholarships for research in 59 countries, including 12 nations in Africa, 10 in Asia and 15 in South America. Many of these scholarships went to local graduate students. BCI Scholars from universities in the developed world routinely introduce local students to bat research through work as field assistants. The U.S. Forest Service International Program has been an invaluable partner since 2005, providing direct support for about 10 BCI scholarships annually for research in developing countries.

In addition, BCI's Global Grassroots Conservation Program provides small grants for bat-conservation work ranging from testing of low-cost bat houses to education to bat-diversity surveys and more than 75 other conservation programs in a total of 43 countries. These modest awards often blossom into continuing efforts, as in Nepal, Kenya, Colombia, Romania and elsewhere.

A number of leading wildlife and conservation groups include bats in their broader efforts. The Conservation Leadership Programme – a consortium of Conservation International, Bird Life International, the Wildlife Conservation Society and Fauna and Flora International, and now funded by the BP Foundation – has supported bat-conservation projects and leadership training around the world. The UK's Tropical Biology Association runs courses in Africa and Malaysia for students from the developed and developing worlds. Both programs actively encourage continuing conservation action by previous participants.

The Rufford Small Grant Foundation supports many aspiring conservationists' projects involving bats. And the UK's Darwin Initiative aims to help countries rich in biodiversity but poor in resources to preserve their wildlife through the transfer of postdoctoral expertise. The Initiative provides major project grants, some of which have driven bat conservation in such countries as Madagascar, China and Myanmar.

Bat Conservation International's Bats of Latin America and the Caribbean Program operates a very productive series of Spanish-language workshops to train budding bat conservationists and scientists in Latin America. Since its first field-training session in Nicaragua in January 2009, the program has conducted three workshops in Mexico and one in Paraguay. Others are being planned in Colombia, Costa Rica and Peru. The program, adapted largely from BCI's popular 20-year series of Bat Conservation and Management Workshops in North America, is supported by a range of partners and draws participants from around the region. Graduates already have generated several new conservation groups and projects, and the sessions help build international networks of bat workers.

Active grassroots support is essential, and bat-monitoring programs built around recruiting and training volunteers is an effective strategy that combines scientific research with community involvement. The National Bat Monitoring Programme has demonstrated this in the UK, as the Southeastern Bat Diversity Network's annual Bat Blitz has in the United States.

Now the Indicator Bats Program (iBats), a partnership of the UK's Bat Conservation

Trust and The Zoological Society of London, established by Kate Jones (a BCI Science Advisory Committee Member) is working with local partners to build and maintain volunteer-based national monitoring programs across the globe.

A persistent obstacle to conservation in the developing world, where resources are usually scarce, is access to science-based literature, particularly of the “how-to” variety. A potential solution is found in the United Kingdom, where the British Ecological Society and The Natural History Book Service distribute publications in the Techniques in Ecology and Conservation series without charge to applicants from the developing world. Some 3,000 copies of Bill Sutherland’s Conservation Handbook have been given away in this program. Imagine the benefit for bat conservation if Thomas Kunz’s and Stuart Parson’s Ecological and Behavioral Techniques for the Study of Bats, essential reading for all aspiring bat biologists, was made available through a similar program.

There is often a mismatch between academic biology and practical conservation, and this is reflected in the literature. At the 2009 Society for Conservation Biology Conference in Beijing, a workshop debated this issue and presented results of all the species-based research articles appearing in five major conservation journals. Only half presented any evidence that research findings were actually implemented. Thirty percent of the papers on conservation issues in developing countries did not include anyone from the country in question in the list of authors.

That leads me to another vital issue: political engagement. Bat conservationists must become more engaged with law and policymakers, especially in developing countries. An example is American bat conservationists’ success in winning congressional hearings on White-nose Syndrome in 2009 and 2010. Much less has been achieved in India, where bat conservationists are still trying to get fruit bats removed from official lists of “vermin.”

There is much to do to fill this global void. But the history of bat conservation shows clearly that we are up to the task “if we have the will. And what are our indicators of success? We’ll know we are making progress when bat biologists in the developed world invest in capacity-building in the developing world; when more young conservation scientists in the emerging countries are successfully applying for their own grants and writing their own papers; and when scientists in these countries direct their own NGOs to conserve their own bat biodiversity.

We will get there. It is time for all of us to roll up our sleeves and get to work.

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SIDEBAR: Decades of Progress
by Paul Racey

The notion of conserving the world’s bats was virtually nonexistent a few decades ago. If bats were considered at all, they were mostly feared and reviled as mysterious denizens of the night, creatures of evil myth and superstition. But bat conservation has taken root and

blossomed in many nations, as dedicated individuals and organizations gathered scientific knowledge and used it to debunk the myths about these invaluable animals.

Here is a brief overview of the history of bat conservation around the world:

International: Individuals can and do make a real difference, but sustainable conservation requires organizations, partnerships and networks. Probably the first formal bat-conservation entity was created in 1975, when the IUCN (the International Union for Conservation of Nature) established a Bat Specialist Group with representatives from all countries where bat biologists and conservationists could be identified.

Among the most significant achievements of this international group have been two action plans: the conservation of Old World fruit bats in 1992 (currently being revised) and the global status and conservation of microchiropteran bats in 2001.

The Bat Specialist Group now has a website hosted by the Lubee Bat Conservancy of Florida, a nonprofit originally founded in 1989 by Luis F. Bacardi to conserve Old World fruit bats. Now an independent nonprofit, Lubee has broadened its mission to include all plant-visiting bats.

Europe: In 1984, the conservation organization Fauna and Flora International established a Bat Project in the United Kingdom to help realize the protection afforded to bats by the UK's 1981 Wildlife and Countryside Act. That evolved by 1990 into the Bat Conservation Trust (BCT), a non-governmental organization (NGO) which quickly became the authority for bats in the UK, with nearly 100 local groups of volunteer conservationists. The BCT model spread throughout Europe, where, in many countries, organizations were established specifically for bat conservation or existing NGOs assumed responsibility for bats. A current initiative is to establish an alliance of bat-conservation organizations called BatLife Europe.

With Europe's many migratory bat species, the need for international coordination quickly became apparent. An inter-governmental Agreement on the Conservation of Populations of European Bats was signed in London in 1991 as part of the Convention on the Conservation of Migratory Species of Wild Animals (known as the Bonn Convention). Since then, 32 out of 48 eligible countries have signed the Agreement. It is managed by EUROBATs, headquartered in Bonn, Germany, under the aegis of the United Nations Environment Program. Among its many activities are popular European Bat Nights each year, and Year of the Bat in 2011-12.

North America: Merlin Tuttle founded Bat Conservation International in Milwaukee, Wisconsin, in March 1982, as the world's first NGO dedicated exclusively to the conservation of bats. The organization moved its headquarters to Austin, Texas, in 1986. Through vigorous education and outreach, professional-training workshops, on-the-ground conservation efforts and systematic scientific research, as well as a program of scholarships and grassroots conservation grants, BCI has had a major impact on both the protection of bats and the public's perception of them in the United States and much of the world. BCI also played a key role in helping to create and/or nurture a number of current bat-conservation groups in many countries.

A growing network of state and regional bat working groups – each including agencies, nonprofit organizations and individuals – now cover virtually all of the United States and reach into Canada and Mexico. These groups coordinate and often initiate conservation and research efforts and often work to recruit and empower citizen volunteers.

Latin America: In 1994, BCI and Mexico's National Autonomous University founded the Program for the Conservation of Migratory Bats (known as PCMM for its Spanish

initials) to conserve bats that cross the international boundary. Now independent of BCI, a vibrant PCMM, directed by Rodrigo Medellín, a member of BCI's Science Advisory Committee, has expanded to include all 140 species of Mexican bats.

PCMM and bat-conservation groups in Guatemala, Brazil, Costa Rica and Bolivia formed the Latin American Network for the Conservation of Bats (RELCOM) in 2007 to coordinate long-term efforts in Central and South America. The network now includes organizations in 12 countries, with more expected to join soon.

Asia: In Asia, the Chiroptera Conservation and Information Network for South Asia was established in India in 1997 by American Sally Walker. With support from BCI and others, CCINSA puts bat workers throughout the region in touch with one another and also conducts workshops and educational activities in Asian countries leading to the creation of several groups involved in bat conservation.

BCI and a growing number of local and national partners have built since 2006 an increasingly active coalition for bat conservation, education and research in the Philippines. Biologist Tigga Kingston of Texas Tech University, a member of BCI's Science Advisory Committee, founded the South East Asian Bat Conservation Research Unit (SEABCRU) in 2007 to coordinate conservation, research, training and outreach in the region. In Japan, the bat-interest group Koumori-No Kai is active.

Australia: The Australasian Bat Society has operated in Australia since 1984 to encourage conservation, research and education on behalf of the country's bats. The Ku-ring-gai Bat Colony Committee was founded a year later to protect a threatened maternity colony of flying foxes in a suburb of Sydney from habitat loss by a housing development. In 1998, it became the Ku-ring-gai Bat Conservation Society Inc. to encourage research and conservation of flying foxes and other Australian bats. The Bat Conservation Gift Fund has existed for two years and is spent on the habitat restoration project and the education program.

Africa: Bat-conservation groups exist in South Africa and on the islands of the Mascarenes, Comoros and Madagascar. Individual bat researchers and conservationists, many of them recipients of BCI scholarships, are at work elsewhere in Africa, but there are no organizations dedicated to bat conservation.

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