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Cover: All gorilla species are in danger of extinction and are among the primates that benefit from the U.S. Fish and Wildlife Service's Great Ape Conservation Fund. Getty Images

Opposite page: The strawberry poison dart frog in Costa Rica contains skin toxins that medical researchers have synthesized for use in cardiac care. (See "Jewels of the Rainforest" on page 34.) Joe Milmoe/USFWS.

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The Bulletin welcomes manuscripts on a wide range of topics related to endangered species. We are particularly interested in news about recovery actions and conservation partnerships.

Please send us your comments and ideas! E-mail them to us at [esb@fws.gov](mailto:esb@fws.gov).

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## DEPARTMENTS

by Dr. Herbert Raffaele

# Working with People to Conserve Nature

In habitats ranging from deserts to tundra to rainforests, imperiled wildlife will not survive unless the local people are aware and value it enough to secure its future. For this reason, the U.S. Fish and Wildlife Service's *Wildlife Without Borders* program focuses on people as part of the conservation solution. The goal and philosophy of the *Wildlife Without Borders* program is to help people identify, value, and conserve the species and habitats at risk in their region.

An intangible ecological service that is difficult to see, such as the seed dispersal provided by forest animals, is easily overlooked. By drawing connections between keystone wildlife species, the health of local habitat, and the health of the human community in that habitat, we can lend greater tangibility to the value of wildlife. By giving local people the tools to address wildlife problems, which are often the same tools that improve human health and livelihoods, we can achieve effective, long-lasting conservation.

We accomplish this through both individual and institutional capacity building, which is the main focus of our *Wildlife Without Borders* program. Capacity building in this context encompasses educating and empowering people and institutions to more effectively address biodiversity conservation at all levels, from that of the household or local community up to the global scale. Having evolved through several different approaches, the program focuses on identifying signature initiatives within each region where we work: Africa, China,



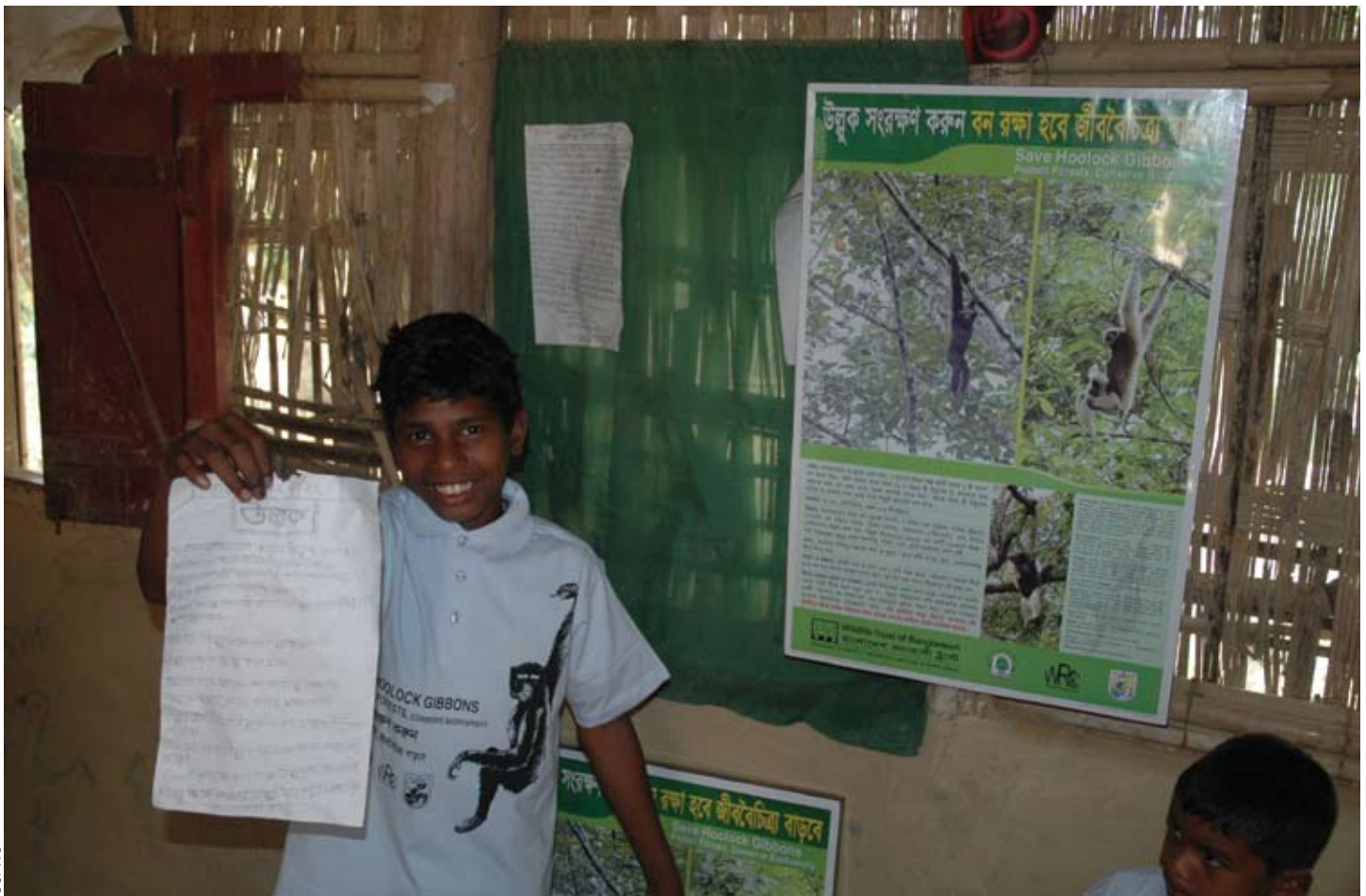
As part of its program to build "conservation capacity" in other countries, the U.S. Fish and Wildlife Service is training future conservation leaders in wildlife monitoring techniques at the Universidad Nacional de Costa Rica.

India, Latin America and the Caribbean, Mexico, and Russia. These initiatives embody the most innovative and effective approaches we have found to engage local people in conservation.

Effectively managing protected areas, law enforcement, anti-poaching activities, and wildlife monitoring is vital to stemming the flow of illegal and unsustainable take of wildlife, and they are funding priorities for *Wildlife Without Borders* grants. But what makes *Wildlife Without Borders* unique is that it goes beyond stopping human-caused extinction; it address the root causes of wildlife and habitat destruction through conflict

mitigation, conservation education, and capacity building.

The FWS has been working internationally for more than 30 years. In 1976, starting as a small office within the Division of Endangered Species, the international program played a lead role in creating the Wildlife Institute of India, which supports research and capacity building overseas. In the late 1970s, the program became a stand-alone office. The first appropriation and grant distribution in 1983 supported conservation in the Latin America and Caribbean region. In 1989, Congress passed the first Multinational Species Conservation



USFWS

Conservation education starts young in some southeastern Asia communities. This young student is learning about the endangered Hoolock gibbon.

Fund, creating a grant program to conserve African elephants.

Since then, the *Wildlife Without Borders* program has grown to include five Multinational Species Conservation Funds (African elephant, rhinoceros and tiger, Asian elephant, great apes, and marine turtles). Four regionally based conservation programs cover Latin America and the Caribbean, Russia, China, Mexico, and Africa. In the fall of 2009, we launched a globally based program to address cross-cutting issues such as climate change. The Division of International Conservation, which administers the *Wildlife Without Borders* program, now comprises nearly 30 staff members and a budget of more than \$24 million.

Throughout this edition of the *Endangered Species Bulletin*, we explain how the *Wildlife Without Borders* species, regional, and global programs work

to address the immediate conservation needs of key species and to help other countries tackle the underlying causes of conservation problems. We appreciate the opportunity to illustrate the challenges we face and the unique methods we have developed to address them.

With our counterparts in other countries, we seek to conserve not only the species we appreciate for their beauty but also the amazing, exotic habitats in which they live.

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# Beyond Borders

by Rachel Penrod and  
Dr. Michelle Gadd

**I**nternational borders hold significant weight in determining the activities of the people within them, and the state of the habitats and species they surround. The study of borders created by human societies and their ramifications is a subject for anthropology, not conservation biology. Yet conservation cannot be achieved successfully without a full understanding of how artificial boundaries interact with the wildlife whose ranges fall across them.

The African elephant (*Loxodonta africana*) is typical of an animal that does not acknowledge international boundaries. Elephants once occurred in virtually all of sub-Saharan Africa. Currently, elephants inhabit 37 African countries. Elephant distribution is influenced by

the availability of food and water, by security in protected areas, and even by social relationships among elephants. Individual elephants may move hundreds of miles from season to season, and their home ranges can extend more than 7,700 miles<sup>2</sup> (2,000 kilometers<sup>2</sup>). In a given year, a single elephant may move from a low-lying wetland to a high, arid plateau. These essential movements take elephants from park to park and country to country, with no regard for boundaries.

But their conservation status and level of protection varies wildly from country to country. In some places, these animals are secure and well-protected, while in others, they are constantly at risk from poaching. Management policies also vary from one country to its neighbor, with

some allowing trophy hunting and others strictly forbidding it. Some countries have locally high elephant densities and are under pressure to cull animals to prevent habitat degradation. Other countries have severely diminished elephant populations due to decades of war, civil unrest, or weak law enforcement and are seeking to reintroduce elephants from elsewhere.

Elephants are also hunted for their meat. Internationally, they are desired for the ivory of their tusks (which are actually large incisor teeth). At the same time, elephant habitat is rapidly changing, subject to the transformations that accompany human population growth and economic development. Add to this the challenges of a changing climate;

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African elephants in this family group display the tusks coveted by poachers to supply the ivory trade.



Andrea Turkalo

elephant food plants may shift north or south, elephant home ranges may move accordingly, and they may be forced to use migration paths or to recolonize parts of their former range. The parks arbitrarily designated for them may no longer contain ideal habitat, and the elephants may have to move elsewhere to survive.

This story is not unique to the elephant. Take the situation described here and repeat it a thousand times, or ten thousand times, across the globe. Repeat it as many times as there are species that historically ranged across the barriers separating people with different laws, customs, and languages. Or, perhaps more challenging, repeat this situation as many times as there are species affected by far-ranging environmental damage, particularly when it is caused by countries outside the species' range. Now, step into the shoes of a government agency attempting to work successfully across these borders and you will begin to understand the magnitude of the challenge we face in conserving wildlife internationally.

The U.S. Fish and Wildlife Service's *Wildlife Without Borders* program can-

not redraw human boundaries to coincide with ecoregions, nor can it resolve the political differences that exist among countries, states, or communities whose borders affect wildlife. But we can work with local people to help them see beyond borders, beyond politics, and beyond culture when they look at the animals that share their habitat. We can support the efforts of these people and those of experts working for our partners in the conservation community, large and small, to create ways for both people and wildlife to thrive.

The *Wildlife Without Borders* species programs, many of which are driven by congressional acts mandating conservation of certain important species, fight the acute "five alarm fires" of conservation. But *Wildlife Without Borders* recognizes that if we invest all of our resources in fighting fires, we will never address the long-term issues underlying conservation problems. The *Wildlife Without Borders* regional programs complement the species programs by addressing core problems having to do with human capacity building, increasing the capability of people to effectively address conservation issues in the habitats within which they

live. You don't build human capacity overnight, but it has to be part of any solution.

The United States can't do this alone. For this reason, the *Wildlife Without Borders* global program works through international accords, and with global institutions, to address cross-cutting conservation issues collaboratively. So far, the *Wildlife Without Borders* species, regional, and global programs have worked with nearly 600 partners, while providing more than \$90 million for wildlife conservation beyond our own borders.

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For more information on *Wildlife Without Borders*, please visit our webpage at [www.fws.gov/international/DIC/dic\\_home.html](http://www.fws.gov/international/DIC/dic_home.html)

Two white rhinos (*Ceratotherium simum*) sparring in Lake Nakuru National Park, Kenya.



Joe Mirnoe

by Earl Possardt

# Sea Turtles Bring People and Nations Together

Sea turtles, ancient mariners for well over 100 million years, were abundant until humans began plying the seas. All seven sea turtle species are now listed under the Endangered Species Act as either endangered or threatened. Two species, the Kemp's ridley and the flatback, are restricted to the Gulf of Mexico/Eastern U.S. Atlantic Coast and the

North Coast of Australia, respectively. The other five – loggerheads, hawksbills, olive ridleys, greens, and leatherbacks – are circumglobal in distribution, with populations of each species found in Earth's three major oceans.

An example of the severe threats to sea turtles can be found in the East Pacific leatherback population. As

recently as the mid-1980s, it was considered the world's largest leatherback nesting population, with more than 150,000 nests deposited on Mexico's Pacific coast each year. By the 1990s, however, it was in dramatic decline. In some recent years, fewer than 1,000 nests were documented annually on these beaches. Years of excessive exploitation of eggs and nest-

Olive ridley sea turtles, which nest in daylight, come ashore in this *arribada* at Ostional, Costa Rica.



Roldan Valverde/SELU





Caribbean Conservation Corporation

Children in a community in Panama look on as a hawksbill sea turtle is released.

ing females, combined with the incidental take of leatherbacks by drift net<sup>1</sup> fisheries in the North Pacific, coastal gill nets<sup>2</sup>, and longline fisheries<sup>3</sup>, contributed to the crash of this population.

Loggerhead turtles, once considered a secure species, are now in trouble globally. Seven of the nine nesting populations are declining, including the two largest populations, which account for 80 percent of the world's loggerheads. Unsustainable mortality from longline fisheries by-catch is a likely cause, but illegal harvest of Cape Verde (off the

western coast of Africa) nesting females for meat threatens to extirpate the third or fourth largest loggerhead population in the world. Other sea turtle species face similar threats. Thousands of olive ridleys from *arribada*<sup>4</sup> populations in India face death annually from incidental capture and drowning by coastal trawlers and gill nets, and many green turtle population throughout the world are overexploited for subsistence and commercial purposes.

For some species, there is good news. The Kemp's ridley turtle is showing a

remarkable recovery from its recorded low of 702 nests in 1985 to almost 21,000 nests in the 2009 nesting season, demonstrating the success of a 30-year conservation partnership between Mexico and the United States. And several major hawksbill nesting populations in the Caribbean are increasing, reflecting three decades or more of sustained conservation efforts and a 1995 ban on the international trade in tortoise shell.

In recognition of the global threats to sea turtles, their complex life cycle and migratory nature, and the neces-

<sup>1</sup> Drift nets consist of a number of gillnets strung together. They are left free to drift with the current, usually near the surface or not far below.

<sup>2</sup> A gillnet is a net used to snare fish that try to swim into deliberately sized mesh openings but are unable to squeeze through.

<sup>3</sup> Longline fishing is a commercial technique that uses a long line, called the main line, with baited hooks attached at intervals by means of branch lines called "snoods." A snood is a short length of line attached to the main line by a clip or swivel, with the hook at the other end. Lines can extend for miles and include thousands of hooks. Tuna, sharks, swordfish, and halibut are some of the species most commonly targeted.

<sup>4</sup> "Arribada" is Spanish for "arrival." In this context, it refers to the synchronous nesting of up to tens of thousands of females on several kilometers of nesting beach within hours or over the course of a few days.



Scientists have attached a device to this loggerhead sea turtle on Masirah Island, Oman, to track its movements.

sity for international cooperation and U.S. leadership to conserve them, Congress passed the Marine Turtle Conservation Act of 2004. The Marine Turtle Conservation Fund created by the act and administered by the U.S. Fish and Wildlife Service provides grants to foreign countries for conserving nesting sea turtles and their habitats. Since the program's inception, the *Wildlife Without Borders* Marine Turtle Conservation Fund (WWB-MTCF) has awarded 133 grants totaling more than \$4,626,000 to more than 30 countries.

Can the WWB-MTCF really make a difference, or is it just a drop in an ocean already expanding from global climate change, inundating beaches, exacerbating coral reef bleaching, changing hatchling sex ratios, and perhaps changing currents that hatchlings rely on for dispersal

to developmental habitats? I can't see beyond the climate change horizon, but I know we are making a difference by ensuring that some populations will survive to test their adaptive capacity. We are not only working to head off catastrophes in the short term, we are raising the world's awareness of global environmental threats and helping to build community and institutional capacity for conservation.

The WWB-MTCF has vastly improved efforts to save the West Africa leatherback nesting population, one of the two largest remaining leatherback populations in the world. It supports activities for this population from its epicenter in Gabon north through Equatorial Guinea, Liberia, and Sierra Leone, and south through Congo and Angola. The WWB-MTCF also provides

the primary support for recovering the largest former hawksbill nesting population in the wider Caribbean at Chiriqui Beach, Panama. This effort, led by the Caribbean Conservation Corporation, is already showing progress. Since the program's inception in 2004, hawksbill nesting has increased and more of the nesting females are surviving. There are many more equally compelling projects being supported by WWB-MTCF in the Middle East, Asia, Africa, and Western Hemisphere.

For me, one project illustrates, in both a symbolic and a personal way, the act of bringing people and nations together for marine turtle conservation. In 1968, U.S. Marines faced Viet Cong (V.C.) and North Vietnamese Army soldiers as foes in the then northern province of Quang Tri, South Vietnam. Wildlife was the

last thing on the minds of the Marines, although they commonly encountered tigers, primates, snakes, and sambar (similar to an elk or very large deer) in the jungles and grassland savannahs south of the Demilitarized Zone. At the time, unknown to a least the Marines, a significant leatherback colony nested along Vietnam's coast southward from Quang Tri Province. The beaches were pristine in spite of the war, although neither one particular 15-year-old Viet Cong nor this 20-year-old Marine he would later meet were thinking about beaches or conserving sea turtles. As the years passed and the war ended, over-exploitation of eggs and adults reduced that leatherback population to just a few nesting females.

Fast forward to 2006. Fate and a meeting of the Indian Ocean Southeast

Asia Marine Turtle Agreement in Oman brought me together with Ms. Bui Thi Thu Hien, a Vietnamese biologist working for IUCN-VN. We hatched a plan to develop a WWB-MTCF proposal for restoring Vietnam's leatherback populations. Even though the population may be past the point of recovery, we believed the community-based activities that would develop around the remnant leatherbacks would galvanize local conservation programs, benefiting other species that suffered from by-catch in near-shore waters. In any case, this nesting leatherback population was doomed without intervention. In 2007, the project was funded by WWB-MTCF, and I returned to Vietnam for the first time in 40 years to meet with the project personnel. At my first meeting in Quang Tri, I met Vice Director Hoang Dinh Lien of the Quang

Tri Department of Fisheries, who was heading up field implementation of the leatherback project. When our interpreter explained to him that I had "lived" in Quang Tri Province for about a year in 1968, Mr. Lien offered a handshake and said with a smile, "Oh, me V.C." And so began a partnership and a friendship, fostered by a shared hope for Vietnam's leatherbacks and other sea turtles.

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For more information on the Marine Turtle Conservation Fund, visit: [www.fws.gov/international/DIC/species/marine\\_turtles/marine\\_turtle.html](http://www.fws.gov/international/DIC/species/marine_turtles/marine_turtle.html)

**Vietnamese biologist Hoang Dinh Lien and Earl Possardt, who returned to Vietnam for the first time since 1968, worked together to protect a critical leatherback sea turtle nesting beach.**



USFWS

by Melida Tajbakhsh

# Two Nations, One Goal

**I**n terms of biological diversity, Mexico is one of the most important countries in the world. Although it comprises only one percent of Earth's land surface, it contains more than 10 percent of all species known to science. Half of these species can be found only in Mexico. Mexico also boasts examples of most of the planet's recognized ecosystem types. Fourteen Mexican eco-regions are considered a world conservation priority. With 32 major vegetation types, Mexico

was also a major center of early plant domestication. Its position as the transition zone between New World temperate and tropical regions establishes it as a key plant and animal dispersal corridor for North America.

Unfortunately, this rich biodiversity is at risk. About 33 percent of Mexico's mammal species are either threatened or in danger of extinction. Seventeen percent of the birds, 18 percent of the reptiles, 17 percent of the amphibians, 4

percent of the fishes, and 2 percent of the vascular plants share this unfortunate distinction.

In response, Mexico has taken unprecedented actions in the past two decades to protect its wildlife resources. It joined the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1991 and the Convention on Biological Diversity in 1993, then established its own National Biodiversity Strategy. Landmark events

More than 700 volunteers from Mexico and the U.S. have engaged in binational riparian restoration along the Rio Grande/Rio Bravo corridor .



Chris Best/USFWS



USFWS

A Mexican *campesino* cultivates agaves for reforestation. Agaves are a critical food source for the endangered long-nosed bat.

include creation of the Office of the Attorney General for Environmental Protection (PROFEPA) in 1992 and the Ministry of Environment and Natural Resources (SEMARNAT) in 1994, which elevated natural resource conservation to the cabinet level for the first time in Mexico's history. Again in 1994, Mexico enacted its Law for Endangered Species Protection.

In 1995, SEMARNAT established Mexico's national wildlife agency. The same year, it joined forces with the United States and Canada to create the Canada/Mexico/U.S. Trilateral Committee for Wildlife and Ecosystem Conservation and Management. Then, in 2000, Mexico enacted its General Wildlife Law, the country's most comprehensive wildlife legislation. A year later, it created the National Commission of Natural Protected Areas (CONANP),

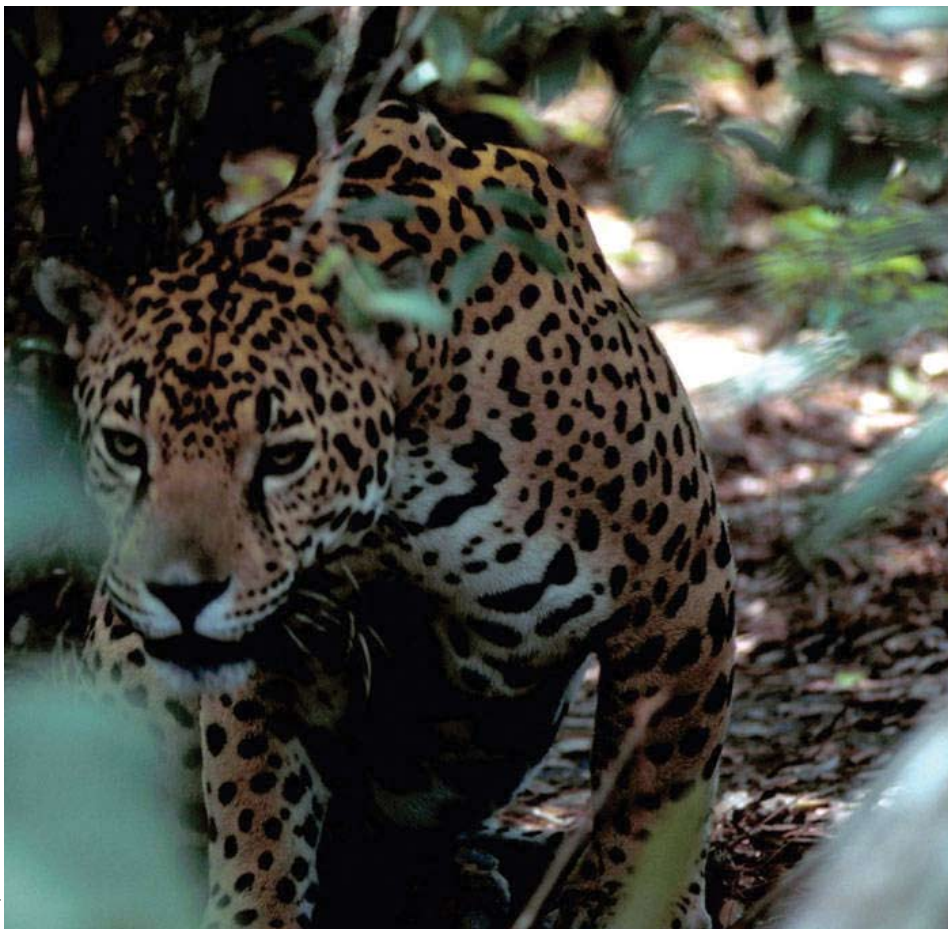
which now manages 173 protected areas totaling more than 60 million acres (over 24 million hectares), over 12 percent of Mexico's land. More than one-third of these protected areas are along the U.S.-Mexico border and encompass 6,855 square miles.

Both countries recognize the need to work together for conserving these shared biological resources. In fact, with the extirpation of some species from the U.S., the remaining Mexican stocks provide a chance for managers to reestablish species in historical ranges within our country. Cross-border cooperation is essential to conserving the biological diversity of the border region and, just as significantly, in providing stopover and wintering habitats to the myriad migratory species shared by the two nations.

A major obstacle identified by Mexico in the development and implementation

of its conservation strategies is the lack of trained personnel. In 1995, the U.S. Fish and Wildlife Service's *Wildlife Without Borders-Mexico* Regional Program (WWB-Mexico) and SEMARNAT created a joint grants program to address this problem. The goal is to strengthen Mexico's capacity to conserve biological resources through training in wildlife and natural resource management. Since 1995, this program has supported almost 300 conservation projects to promote local capacity building in Mexico, investing over \$8 million and generating more than \$21 million in counterpart contributions.

Projects supported under the WWB-Mexico program fall within one of three strategic initiatives. "Managing for Excellence" provides on-the-job training in natural resource management for Mexican personnel, with an emphasis on



**The largest species of cat in the Western Hemisphere, the jaguar historically ranged from southern South America northward to the southwestern United States. If jaguar numbers are restored in northern Mexico, this cat could reoccupy parts of its U.S. range.**

state-level personnel, particularly along the U.S.-Mexico border. “Stewards of the Land” provides training in sustainable natural resource use for natural resource owners and/or direct users, such as ranchers, local farmers’ and indigenous peoples’ organizations, particularly in or around nature reserves and other areas important for biodiversity. “Voices for Nature” provides training in environmental education and public outreach to key stakeholder groups, such as teachers, journalists, and decision-makers.

Projects supported by WWB-Mexico in the Monarch Butterfly Reserve exemplify the effectiveness of this program. Monarch butterflies (*Danaus plexippus*) are well known for their very lengthy migration patterns, unique in the insect world. When WWB-Mexico first began to support habitat conservation at the monarch’s wintering grounds in Mexico, many local farmers believed “outsiders”

cared more about an insect than the survival of their impoverished children. They also resented that their lands were declared a reserve without consultation. Animosity grew to the point that some butterflies clustering in tree branches were burned. Today, however, training provided through this program has benefitted more than 2,000 farmers living in the Monarch Reserve. Training in soil and water conservation and ecotourism has brought economic benefits to the local communities. Environmental education has raised the level of awareness of local people, who now enthusiastically celebrate the arrival of the monarch butterflies each winter. Brigades of volunteers are involved in projects to protect this species and its wintering habitat. Their work includes habitat restoration, reforestation, population monitoring, and efforts to prevent illegal logging, in partnership with PROFEPA.

Nearly 15,000 people in Mexico have received training through this program. Other accomplishments include 50 courses benefitting hundreds of Mexican natural resource managers, 170 management and/or species recovery plans, 200 training manuals, 20 new non-governmental organizations, and 5 new nature reserves in Mexico. More than 40 nature reserves and 100 species of international concern (60 of which are shared with the U.S.) now stand to gain additional protection. Species aided by these



efforts include the jaguar (*Panthera onca*), Mexican grizzly bear (*Ursus arctos*), West Indian manatee (*Trichechus manatus*), desert bighorn sheep (*Ovis canadensis*), grey whale (*Eschrichtius robustus*), golden eagle (*Aquila chrysaetos*), brown pelican (*Pelecanus occidentalis*), California condor (*Gymnogyps californianus*), long-nosed bat (*Leptonycteris curasoae*), leatherback sea turtle (*Dermochelys coriacea*), and Kemp's ridley sea turtle (*Lepidochelys*

*kempii*). For a complete list, see the Wildlife Without Borders-Mexico Report at <http://www.fws.gov/international/DIC/regional%20programs/mexico/mexico.html>.

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**Monarch butterflies find refuge in Mexico at the end of their long annual migration.**



USFWS

by Dr. Richard Ruggiero

# Africa's Wildlife and the Bushmeat Crisis

Put the words “Africa” and “wildlife” together and many people picture a vast savanna filled with large charismatic animals, a scene punctuated by the life and death struggles so well documented by naturalists and filmmakers. Indeed, Africa is home to many of the world’s most spectacular species. It also contains a diversity of ecosystems ranging from deserts to savanna grasslands, wood-

lands, mountains, marine ecosystems (including an almost continuous string of coral reefs from northern Kenya to South Africa), mangroves and estuaries, and the enormous equatorial forest.

In fact, unparalleled populations of large migratory mammals do cross the savannas of eastern and southern Africa. Again, the image that comes to mind is the spectacular Serengeti migration

undertaken annually by more than a million ungulates in northern Tanzania and southern Kenya. Less well known is another annual migration of perhaps even more animals. This one, in southern Sudan, involves vast herds of antelopes such as white-eared kob and korrigum, mongala gazelles, and even elephants. Three species of great apes – gorillas, chimpanzees, and bonobo – occupy the

Groups of zebras and water buffalo running across the Seronera River in Tanzania present a picture of abundant wildlife in Africa, but many of the continent’s iconic animals are threatened by habitat loss and uncontrolled shooting to supply the bushmeat trade.



Michelle Gadd/USFWS





Africa MENTOR Program fellows and mentors. Credit USFWS.

immense swath of equatorial forest that spans western and eastern Africa.

But Africa's exceptionally diverse assemblage of wildlife and habitats face significant problems. Growing human populations, illegal hunting, and the transformation of land for agricultural purposes are increasing throughout Africa. The exploitation of natural resources creates pressure on wildlife habitat; industries such as mining, logging, and petroleum extraction alter ecosystems, open more roads, and bring people into closer contact with wildlife. Climate instability may exacerbate human-wildlife conflicts when people and animals compete for water or rangelands. In some countries, political instability undermines the ability of governments to protect and manage wildlife. These problems are worsened by the illegal killing of wildlife for the trade in bushmeat (meat derived from wild animals).

To address these problems, wildlife professionals not only need a strong scientific capacity but also non-traditional skills for problem solving, including

community outreach, conflict resolution, and coalition building. That's where the U.S. Fish and Wildlife Service's *Wildlife Without Borders*-Africa Regional Program (WWB-Africa) becomes critical. In essence, the goal of WWB-Africa is to help African nations develop the human and institutional capacity for running their own conservation and wildlife management programs.

To accomplish this goal, WWB-Africa provides support through grants for wildlife management capacity-building projects and through an innovative approach of mentored fellowships on critical themes. By raising the capacity for wildlife conservation throughout Africa, WWB-Africa meets a growing demand for non-traditional skills and approaches to conservation. Additionally, the program helps build local capacity to mitigate the impacts of extractive industries, climate change, human-wildlife conflict, the illegal bushmeat trade, and wildlife disease in and around protected areas. Target audiences include wildlife managers, guards, rangers, outreach and

educational specialists, community leaders, and other decision makers.

In 2008, the Service awarded 10 WWB-Africa grants totaling \$505,625, which was matched by \$1,049,325 in leveraged funds from other partners. Eleven grants awarded in 2009 added more than \$460,000. The projects supported by these grants include training African veterinarians in wildlife and ecosystem health, bringing together veterinary colleagues from around the world, and training Gabonese biologists, resource managers, and students to implement West African manatee conservation initiatives. The highlight of the WWB-Africa is the MENTOR Fellowship Program, which took place in 2008 and 2009.

#### **MENTOR Fellowship Program**

The rising demand for bushmeat in Eastern Africa from an expanding human population that is subject to economic and environmental stress has led to a severe decline in many wildlife populations. Alleviating the impact of the illegal

bushmeat trade requires a multidisciplinary approach involving wildlife policy, law enforcement, public awareness, and sustainable alternatives.

WWB-Africa builds capacity in these areas through fellowships based at the College of African Wildlife Management in Tanzania. The MENTOR Fellowship Program (Mentoring for ENvironmental Training in Outreach and Resource conservation) supported training for new conservation leaders from four Eastern African countries: Tanzania, Kenya, Uganda, and South Sudan. A hallmark of the program was the involvement of four highly-experienced African conservation

professionals, who worked closely with the fellows throughout the 18-month program.

During the program, the fellows implemented field projects in their home countries. In the first phase, they conducted local bushmeat assessments through field work, research, monitoring, stakeholder workshops, and policy reviews. Based on these assessments, the fellows then developed innovative responses to such issues as alternative livelihood and food sources, policy and legal problems, law enforcement, wildlife-human health interactions, education, and constituency building.

The MENTOR program helped develop a network of professional conservationists in Africa dedicated to controlling the illegal bushmeat trade. Program fellows gained greater exposure to the international dimensions of the issue and developed important new contacts. The program was funded through a cooperative agreement among the FWS, the College of African Wildlife Management, and the Africa Biodiversity Collaborative Group (a consortium of the Wildlife Conservation Society, Conservation International, World Wildlife Fund, African Wildlife Foundation, Jane Goodall Institute, World Resources Institute, The

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**A lone giraffe, one of many wildlife species targeted by hunters for bushmeat, accentuates this view of the Seronera Plain in Tanzania.**

*Credit Michelle Gadd/USFWS.*





**Africa MENTOR Program trainees and leaders discuss strategies to combat the illegal bushmeat trade.**

*Credit Dirck Byler/USFWS*

Nature Conservancy, and International Union for the Conservation of Nature).

The MENTOR approach to problem solving through teamwork and cooperation continues under a grant to the Bushmeat-free Eastern Africa Network (BEAN). BEAN ([www.bushmeatnetwork.org](http://www.bushmeatnetwork.org)) is an interdisciplinary and multi-institutional network of stakeholders (wildlife professionals, human development experts, government representatives, private industry, academic experts, community leaders, and other citizens). It works collaboratively to raise awareness; focus attention; share information; analyze, evaluate, and report on trends; and leverage resources for grassroots solutions to bushmeat exploitation in Eastern Africa. Through this extensive partnership, WWB-Africa

will continue to build awareness and wildlife management capacity in ways that complement the *Wildlife Without Borders* species programs.

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For more information, please visit the *Wildlife Without Borders*-Africa program web page at [www.fws.gov/international/DIC/regional%20programs/africa/Africa.html](http://www.fws.gov/international/DIC/regional%20programs/africa/Africa.html)