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The Bear Conservation Fund

of the
International Association for Bear Research and Management (IBA)

Annual Report 2011

December

Conserving the world's bears through science and collaboration

The Bear Conservation Fund

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research,
exchange,
& collaboration
in conservation of bears
around the world

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Message from the Chair

In the past 2 years, I have experienced an increasing number of those remarkable moments in the life of a family when I realize I am witnessing a sort of “changing of the guard” - a shift to a new paradigm. As children marry and find their work in the world, grandchildren enter the households, and our elders pass on, we all move into new roles. For me, despite the myriad troubles of the world, there is an unexpected optimism in watching the next generation take on those challenges, jumping feet-first into the fray, to become the movers and shakers of the next half century.

Similarly, as I approach 30 years of membership in IBA, I watch its own “changing of the guard” and I find in it the same optimism. Of IBA’s current Officers and Councilors, only 2 were working in the field when I began

my career in bear research. Most of my colleagues began theirs a good bit later.

It is noteworthy to me that at least 9 of the current Council members, somewhere along the way, received support in their work

from IBA Research & Conservation grants, most often as students just starting out. Last July, it was particularly gratifying to see how many of the presenters at the 2011 International Conference for Bear Research and Management also had received support in vital conservation work from IBA grants. These are the grants that the **Bear Conservation Fund and your support** make possible.

The young professionals I saw presenting their work have become their countries’ scientific experts, conservation educators and advocates, in many cases, in places where there previously were none. I have no doubt that IBA and the Bear Conservation Fund have played no small part in their growth into dedicated biologists and committed professionals—in fact, into becoming the conservation movers and shakers of the next 50 years.

This is the legacy of **The Bear Conservation Fund (BCF)**. As you will see in the following pages, the fruits of strategic investment in small targeted grants become more and more apparent each year. Thank you.

Karen Noyce, Chair
The Bear Conservation Fund



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Thanks

for your generous support of the Bear Conservation Fund, 2011

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 - Telonics, Inc
 - Geoff York
 - Zoological Society of Buffalo
- And other anonymous donors**

*An IBA donor-advised endowment

Fig. 1 Donor Sources for 2011 Bear Conservation Fund



Fig. 2 Allocation of 2011 Bear Conservation Fund



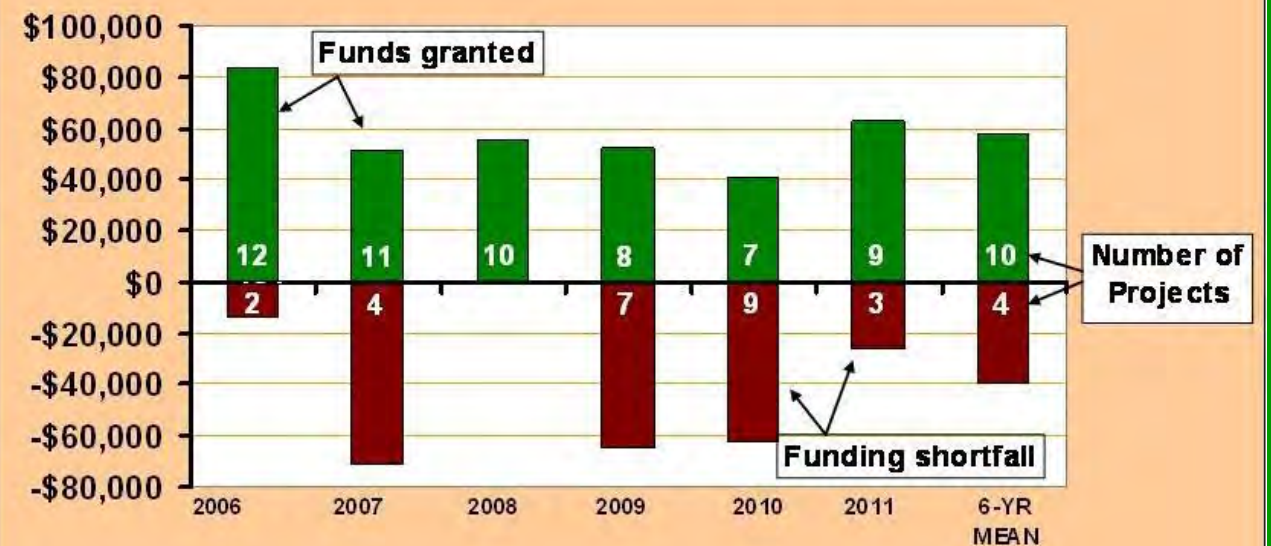
Income and Allocations Report Card

We were pleased in 2011 to be able to maintain our no-overhead policy, ensuring that 100% of donor contributions to the Bear Conservation Fund (BCF) feed directly into IBA program grants. Donations received from 1 March 2010—28 February 2011 provided US \$66,809 for the 2011 grant cycle, representing a 37% increase from 2010 and the second highest* 1-yr income since BCF inception in 2004.

Of total revenues for 2011 grant programs, \$12,500 each came from the John Sheldon Bevins Memorial Fund and from an IBA internal endowment, the Homer Bear Conservation Fund (Fig. 1). The rest came primarily from private individuals and zoos, in amounts ranging from \$25—\$20,000,

Research & Conservation Grant awards totalled \$62,662 (including \$3,426 of unused funds from 2010) and was the most awarded since 2006 (Fig 1). Fewer deserving proposals had to be turned away in 2011 for lack of funds than in 3 of the 4 previous years (Fig 3).

Fig. 3 Funding Shortfall for Top-Rated Research & Conservation Grant Proposals



*In 2006, income totalled \$88,100, due primarily to a single \$50,000 donation from the McGuire Family Foundation.



Research & Conservation Grants 2011: TOTAL \$ 62,663

ASIA: \$44,462



© Muhammed Ali Nawaz

In 2011 the Bear Conservation Fund supported

9 Research & Conservation grants and 1 Experience & Exchange grant. The following pages provide brief descriptions (see right) of what those grants accomplished. Two of the projects, implemented in Pakistan and China, are profiled in more detail on pages 4 and 6. Among this year's projects, 4 are helping to fill enormous gaps in basic knowledge of where bears still exist, 5 make use of modern genetic tools to assess population status and inform future conservation planning, several involve new protected areas. All represent hundreds of hours of legwork in the field, searching for bear sign, interviewing and educating people, setting and checking traps and hair snares, monitoring radio-collared animals, and conducting vegetation surveys. All represent BCF dollars at work.

First assessment of status of bears in Lao Peoples Democratic Republic (PDR)

Lorraine Scotson, Free the Bears Fund

Lorraine Scotson, in her second year of ground-breaking work assessing the status of bears in Lao PDR, has now completed 2 of 5 planned surveys in the country's National Protected Areas (NPAs). Each survey involves assembling and training a local team, interviewing key local villagers and conducting extensive systematic searches for signs of bears in the area's forests.

In 2010, Lorraine found encouragingly abundant evidence of bears and other wildlife in the Nam Et Phou Louey (NEPL) NPA in northern Lao. This year, however, presented a starkly different situation in Xe Pian NPA, located in the south along the Myanmar border. There, unsustainable hunting appears to have decimated bear populations.

Lorraine's strategic approach to broad-scale assessments enables efficient identification both of crucial sites for proactive conservation and the specific threats that bears face in each region. For example, conservation measures around NEPL, where bears are abundant, will focus on mitigating crop-raiding and attacks on people, whereas at Xe



© Lorraine Scotson

Pian, monitoring and stopping poaching will be most important.

In 2012, Lorraine will move survey work to 2 NPAs in northern Lao.

\$ 7,765

IBA



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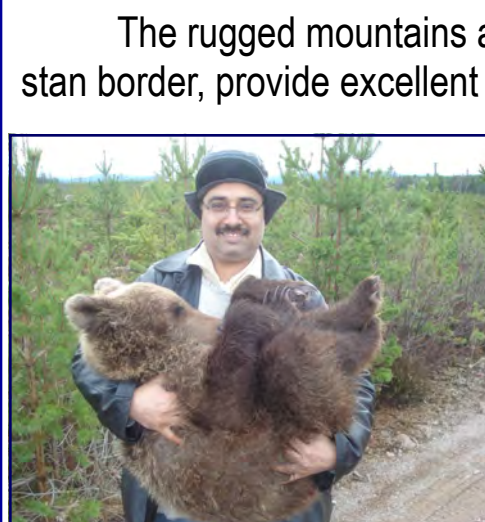
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Research & Conservation Grants 2011:

Project Profile: Pakistan

Status and Conservation of bears in the new Broghal and Karmabar National Parks, northern Pakistan

Dr. Muhammed Ali Nawaz, Country Director, Snow Leopard Trust, Pakistan



The rugged mountains and remote valleys of Pakistan's new Broghal and Karmabar National Parks, located along the Afghanistan border, provide excellent habitat for many endangered mammals, including brown bears, snow leopards, Himalayan lynx, grey wolf, Himalayan ibex, blue sheep and Marco Polo sheep. Despite this remarkable potential there is dearth of information on biological resources of these parks. An IBA Research and Conservation Grant enabled Dr. Muhammed Ali Nawaz to lead the first ever scientific expedition into the area.

Using remote-activated cameras, field searches for bear sign, and questionnaire surveys of resident herders, the team confirmed the presence of bears in both national parks, with highest densities along the parks' shared border. This is the area most remote from human settlements. Questionnaires revealed that despite 84% of households reporting livestock loss to predators, few wanted to reduce bear numbers, because most livestock losses were to wolves (97%) and snow leopards.

Dr. Nawaz, who teaches at Pakistan's leading Quaid-I-Azam University, started researching bears as a volunteer in Deosai National Park 1992. In 2002, he received a grant to travel to Norway and present his research at the 14th IBA conference. This led to him enrolling in a PhD program in Norway and completing his dissertation on threats to small high-elevation populations of Himalayan brown bears.

According to Dr. Nawaz, "Pakistan hosts a diverse but threatened community of predators, and there is very limited information about their occurrence, ecology, and conflicts with humans." To address this challenge, he founded and directs the Snow Leopard Trust, dedicated to conserving viable populations of threatened carnivores in Pakistan. "The government has the desire to better manage [the National Parks] for wildlife, however their efforts are challenged by lack of information, technical capacity to conduct surveys, and funds". As part of the 2011 expedition, Dr. Nawaz's team trained local park staff in survey techniques and provided education about threats to carnivore populations.

Better management of livestock grazing will be key to ensuring survival and recovery of brown bears in Broghal and Karnabar National Parks. "Brown bears show low productivity in the Himalayas and the population cannot grow in the face of ongoing poaching." Dr. Nawaz and team have already initiated an incentive based conservation program in the Karambar National Park, where the community has agreed to help control poaching of predators and prey.



© Muhammed Ali Nawaz

\$ 9,697



Research & Conservation Grants 2011 ASIA (cont)

A genetic-based population estimate of sloth bear numbers in Dachigam National Park, Jammu and Kashmir, India

Dr. S. Sathyakumar, Wildlife Institute of India

Conservation begins with knowing where bears are thriving and where they are not. As part of a study on the ecology of Asiatic black bears in Dachigam National Park, India, Dr. S Sathyakumar is conducting a genetic-based population estimate of bears in his study area. Systematic collection of hair, scat, and blood samples is complete and laboratory analysis has begun. DNA fingerprinting will reveal the identity of each bear sampled, and the total population is estimated from the capture rates of those individuals. This method is widely used in some places, but the cost and labor make it impractical for many applications. Dr. Sathyakumar, however, plans to compare this estimate with results from other methods used in his study area to index bear abundance, thereby obtaining rough calibration of more widely applicable, though less precise methods. Obtaining identity of samples also will provide ancillary data on bear movement patterns.



\$ 9,000

"Our IBA grant played a crucial role in the completion of this project. Without it this study would not have been possible . "



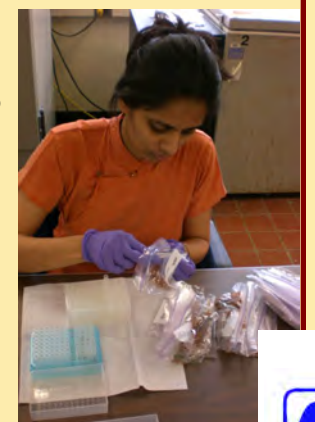
© Sandeep Sharma

Are small populations of sloth bears across central India still connected?

Sandeep Sharma & Trishna Dutta: Smithsonian Conservation Biology Institute & George Mason University

Sandeep Sharma & Trishna Dutta are using genetic techniques to assess the degree to which disjunct sloth bear populations in central India have become inbred due to isolation from other populations. Using fecal and hair samples collected in the wild, Sandeep and Trishna have completed the leg work of identifying effective genetic markers in sloth bears; these must be uniquely identified for each species. Now completed, however, this baseline work will be applicable in future genetic studies of sloth bears.

Preliminary analysis indicates that thus far, habitat corridors appear to be adequate to maintain gene-flow among most sloth bear population strongholds in central India. Where habitat connections among populations are clearly degraded, Sandeep and Trishna have detected indications that genetic isolation between populations is higher. Results of this study help to identify which populations are particularly at risk of genetic isolation. This knowledge will help inform conservation planning efforts for the species.



\$ 9,000



Research & Conservation Grants 2011: Project Profile: China

Are there still sun bears in China?

Dr. Dajun Wang, Peking University, and Dr. Cheng Wen

The last confirmed record of a sun bear in China was during the 1980's. Rapid replacement of forest with rubber plantations since the 1970's has caused sun bears to disappear from view across their range in southern China. Currently it is unknown if sun bears still exist in China and if their numbers can be brought back. Dr. Dajun Wang, a wildlife biologist from Peking University, colleague Dr. Cheng Wen, and 2 assistants, have begun efforts to find out.

Using a combination of digital elevation maps, satellite images, and records of sun bear occurrence, the team spent much of 2011 preparing maps to delineate the most promising areas of sun bear habitat in southeast Yunnan Province (see map). Field work began in October and is ongoing. Through interviews with local people and systematic forest surveys for bear sign, the team has thus far documented abundant evidence of Asiatic black bears, but not sun bears. One piece of information to date, obtained in an interview, suggests the possibility that sun bears are still present in a remote area that the team will visit in February 2012.

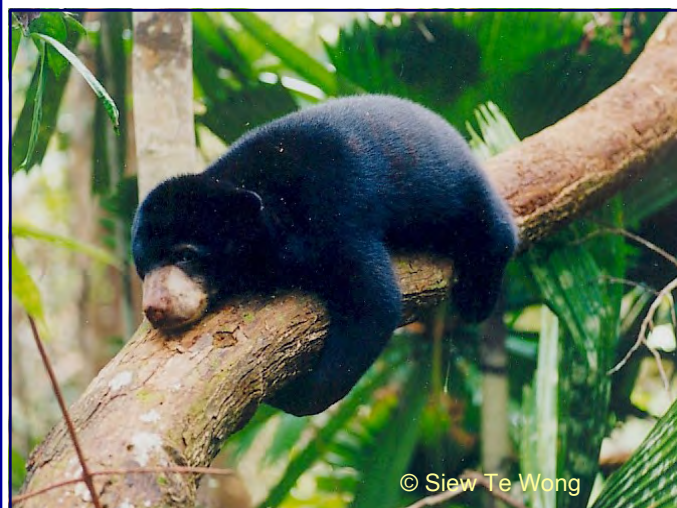
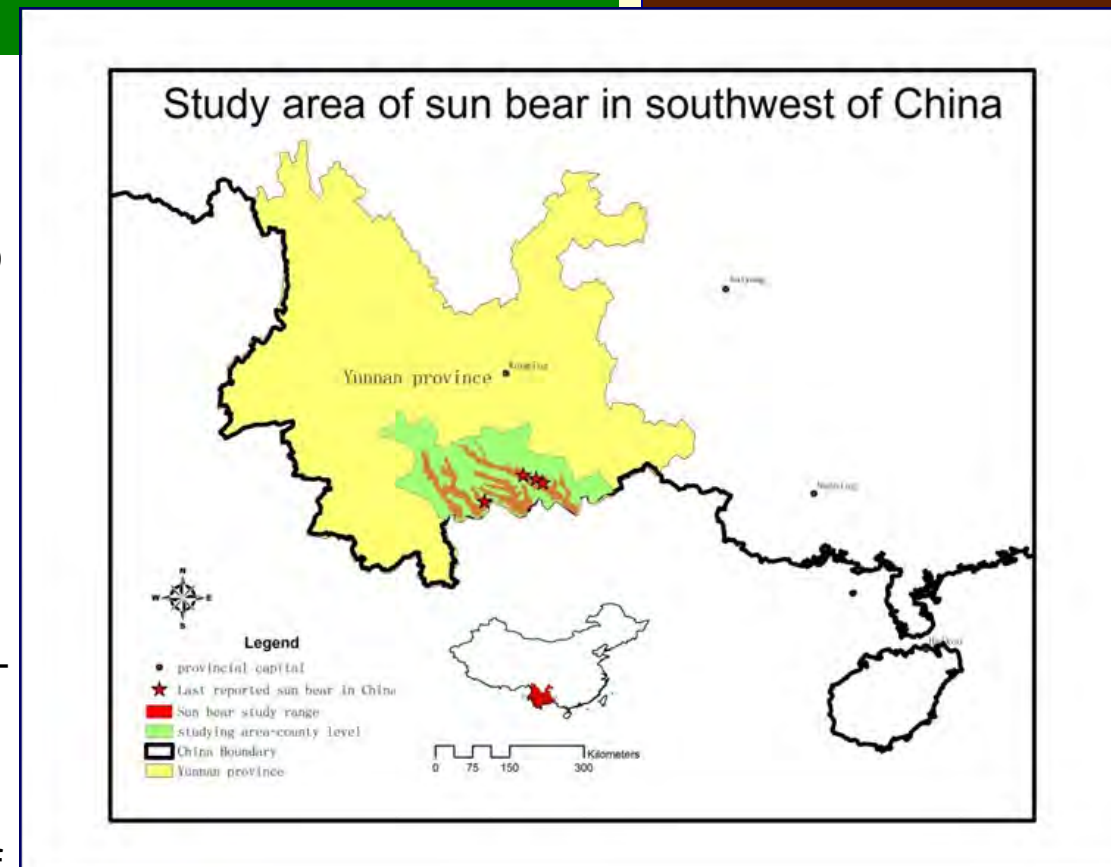
Dajun comes to this ambitious project well-prepared. As an undergraduate student, in 1992, he started working for his university professor radio-tracking wild giant pandas. That work was instrumental in establishing a new reserve for pandas and panda habitat. After 10 years of studying giant pandas, Dajun undertook a project to map black bear distribution and document threats to bears in Sichuan province, using a combination of field surveys, interviews, and habitat modeling. Most recently he has worked in the Qinghai-Tibetan Plateau, studying situations of conflict between humans and Tibetan brown bears. Recently, the first 2 bears in that study were caught and outfitted with GPS collars, and a new team is

now in place to conduct long term research and implement conservation measures for brown bears in Tibet.

Dajun and Cheng will continue their search for sun bears in 2012, hoping to expand the survey to areas of southwest Yunnan Province in the future. "If we find them, we will promote conservation....If we can't find them, we will try to bring them back by habitat restoration and maintaining connection with habitat in Vietnam and Laos. Most important is to persuade the government and public not to eliminate a species for rapid economic development." Dajun adds, "I am very lucky to have had the chance to work on 4 species of bears in China."

A single IBA grant to Drs. Wang and Wen provided over 80% of the 2011 project budget.

\$ 9,000



© Siew Te Wong



Research & Conservation Grants 2011:

EUROPE: \$11,000

Protecting and educating about brown bears in Romania

Csaba Domokos, University of West Hungary, Association for Bird and Nature Protection, Milvus group, Romania

According to Csaba Domokos, "Our most significant achievement in 2011 was that we finally managed to designate 5 new protected areas for bears...These are all located in vital bear habitats and ... cover essential ecological corridors used by bears." A significant achievement, indeed! Because the protected areas are Natura 2000 sites, based on the European Union's Habitat Directive, Csaba notes that in the future, threats to bear populations or habitat in those areas can be taken beyond regional authority to the European level. "This gives us a whole new perspective in bear conservation efforts in Romania."

Besides his work to protect more bear habitat (4 additional areas are proposed), Csaba works equally hard conducting conservation-oriented scientific research (habitat use, movements, daily activity of bears) and improving social acceptance of the species. This year nearly 90 Hungarian and 80 Romanian teachers attended

Milvus Group's "Forest School" to learn about ecology and conservation of large carnivores in the Carpathian region, especially bears.



\$ 6,300

"This gives us a whole new perspective in bear conservation efforts in Romania."

Csaba Domokos



Genetics and conservation of brown bears in the southern Caucasus

Marine Murtskhvaladze, Institute of Ecology, Ilia State University, Georgia

Genetic information about wildlife populations provides insight into their historic distribution. This information can provide guidance for conservation planners regarding delineation of appropriate geographic units for managing at-risk or recovering populations.

Marine Murtskhvaladze previously documented the genetic structure of Georgian populations of brown bears. This year, she undertook the same task, but for populations across the entire south Caucasus bear range, including southern Georgia, Armenia, and Azerbaijan. A significant accomplishment of the year was simply finding appropriate colleagues and establishing a cooperative relationship to achieve project goals. "Our collaborators from Azerbaijan and Armenia provided samples collected in their countries. Currently we have 30 samples from Armenia and 20 samples from Azerbaijan".

Analysis of samples is still underway, but will help identify whether any population requires translocation of individuals to maintain genetic vigor. Recommendations will be provided to the countries' Ministries of Natural resources, WWF and other stakeholders to optimize conservation action plans by preventing excessive inbreeding and loss of genetic diversity.

\$ 4,700



Research & Conservation Grants 2011: South America: \$7200

Genetic investigation of fragmentation of Andean bear populations in Ecuador

Maria Paulina Viteri, University of Idaho, USA

Paulina Viteri has been analyzing mitochondrial and nuclear DNA in bear hair and scats collected across Ecuador. She is investigating what genetic differences among populations can reveal about historic trends in geographic distribution of bears, movement patterns, and population fragmentation, as well as the causes of these patterns. Though the focus is on Ecuadorian bears, Paulina plans to compare results from Ecuador, and the implications thereof, with data from other countries, where available. This technique will help to reconstruct the evolutionary history of the species and also to understand some of the potential impacts of climate change and other anthropogenic change on Andean bear populations.

\$5,000

Identifying critical corridors for bears in Venezuela

Keith Miller, Central Michigan University, USA

Five National Parks protect habitat for Andean bears (*Tremarctos ornatus*) in western Venezuela at the far northern end of the species range. Conservation of bears in this region depends on maintaining habitat corridors connecting the parks. Keith Miller is using GIS modeling to identify unprotected habitat outside and between the parks that is critical for Andean bear conservation.

Keith's IBA grant supported field work in the area of Dinira and Guaramacal National Parks to do ground-verification of habitats as identified from aerial and satellite photography and to assess the types and intensity of agricultural disturbance. This will enable him to create a habitat map layer accurate enough to predict the best areas for protection. Keith collaborates with Shenandoah Garcia-Rangel, whose recent PhD research focused on bear habitat conservation in the Sierra de Portuguesa region of Venezuela and also received IBA funding.

\$2,200



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Research & Conservation Grants 2011:

What about North America?



North American bears are, in general, well-studied and secure in numbers. Most IBA grants go to projects in places where information on bears is lacking and resources to support conservation and research are limited. Some BCF donors specify that their money go to at risk species or places where conservation risks are greatest.

In the future, we would like to be able to include more North American studies among those we fund, for several reasons. Even where knowledge of bears is good, managing bear populations and human-bear conflicts present continuous challenges that new research could help address. Also, specifically *because* bear numbers are high and research data are abundant, places with lots of bears often present the ideal situation for testing and developing new research techniques, gaining understanding of behavior and ecology, and testing management strategies, all of which may be applicable to populations elsewhere.

This is to say that even though, by IBA policy, most of our grants will continue to go where the need is greatest, IBA does welcome proposals for innovative work in North America. And although we generally discourage donors from specifying a species or world region to receive their donation, we do accept such earmarked donations. We will similarly accept donations earmarked for North America.



Planning for Conservation Research in Nepal

Brown Bears

Black Bears



Achyut Aryal hosted Jack Hopkins, University of Montana, for several weeks this summer in the Annapurna region of central Nepal. These 2 researchers are forging a partnership, building on complementary expertise and shared passions, to fill some of the very large gaps in knowledge about the presence and status of bears across central and northern Nepal. This experiential exchange enabled the duo to identify specific needs, potential field sites, and preliminary field protocols for research that will inform conservation planning efforts for bears across Nepal's highland regions. Achyut is already involved in research in the Annapurna area on the interactions between blue sheep and carnivores, including bears. He is working on developing a Conservation Plan for brown bears in Nepal.

During the exchange, Achyut and Jack met with government officials to discuss research and conservation priorities.

They also developed plans for 3 future projects, for which they are now seeking funding. These projects focus on: 1) assessing the status of brown bears in the northern border regions of Nepal, and 2) determining what types of conflict between mountain villagers and Asiatic black bears are most common, and how is this impacting both bears and human residents. These studies will use multiple methods, relying heavily on interviews and systematic collection of bear hair samples, analysis of which yield information about diet, distribution, and numbers of bears.

While Jack was in Nepal, he and Achyut spent some time visiting and interviewing local people in the town of Panchase, lower Annapurna region, about bear incidents and poaching. There they documented black bear sign in the field and nearly saw a bear.



Experience & Exchange

2011

Achyut Aryal , Nepal
Jack Hopkins, USA



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“Conservation of bears is a priority of the Snow Leopard Foundation and IBA is my strong partner in implementing research and conservation programs in Pakistan”

Muhammed Ali Nawaz, Director

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