



International Bear News

*Quarterly Newsletter of the
International Association for Bear Research and Management (IBA)
and IUCN/SSC Bear Specialist Group*

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Using sign to survey bears in southeast Asia, page 6

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Cover photo courtesy of Michael W. Dulaney

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Editorial Policy

International Bear News welcomes articles about biology, conservation, and management of the world’s eight bear species. Submissions of about 750 words are preferred, and photos, drawings, and charts are appreciated. Submissions to ibanews@bearbiology.com are preferred; otherwise, mail or fax to the address above. IBA reserves the right to accept, reject, and edit submissions.

Deadline for the November 2007 is October 5, 2007

Thank you to everyone who contributed to this issue. Artwork is copyrighted – do not reproduce without permission.

Membership

Use the form on page 31 to order or renew memberships, make donations, and/or update member information.

From the President

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It's July as I write this and in Fairbanks, Alaska, the weather is pleasantly warm, about 77°F (25°C). That seems perfect, but all is not well with the earth we inhabit—outside my window, the needles of spruce trees (*Picea*) are tinged with red as a result of infestations by spruce budworms and the leaves of aspen trees (*Populus*) have a silver sheen from infestation by another insect, leaf miners. As the global temperature rises even slightly, these insects are able to thrive in higher latitudes where they could not just 10 years ago. In the American West, from California to Montana, temperatures as high as 104°F (40°C) are lingering near bear habitat, drying streams and affecting the growth of vegetation that bears need to live. Available scientific evidence leads us to expect that polar bears, dependent upon sea ice to live, will be critically affected by thinning of the ocean ice and retreat of the ice edge. But it will not only be the ice bears that feel effects from climatic changes. In the Gobi desert, a small population of brown bears that is dependent upon vegetation near a limited number of springs, may be *just* persisting in the face of a 14-year drought in which mean annual precipitation has reportedly declined from 100 mm to about 50 mm. That's 2 inches each 12-month period over a broad area. My point is that life for bears will likely be substantially affected and some species or populations may face severe declines or extirpation as climate change continues. It will be up to IBA members to develop the strategies to conserve bears in light of the challenges these changes will bring. To do this we need to maintain the strong and active association that

we have—dedicated to doing what we can so that bears still inhabit the land in 100 years and beyond.

Mexico!!

There is still time to register for the 18th International Conference on Bear Research and Management to be held in Monterrey, Mexico. Those attending will be treated not only to the renown hospitality of Mexico, but to a program that includes the most recent advances in bear conservation, bear safety awareness, and bear handling. There will be field trips to nearby bear habitat. Most important will be both the formal presentation and the later informal discussions dedicated to shaping and securing a better future for bears and the habitat upon which they depend. **Rules for international travel and requirements for passports have changed**—be sure to check the conference webpage for updates on this and for travel grant availability (page 28 and <http://www.bearbiology.com/iba/conf01/mex01.html>).

Interim Bylaw Amendments

The workings of our association are governed by the IBA Bylaws, which provide the rules and direction for our actions. The Council recently adopted interim amendments whose primary effects would be to: (1) better reflect IBA objectives and improve consistency within all section of the bylaws; (2) make changes necessary to allow IBA's incorporation; (3) allow increased use of email for communication between the IBA Council and members for important bear conservation concerns and issues affecting our association; and (4) provide that the Treasurer be a US citizen as required to maintain IBA's status as a non-profit, tax-exempt professional organization.

Interim amendments will remain in effect until the membership votes to ratify or reject them. Rather than include the 8 pages of the bylaws, with proposed amendments, in this issue of *International Bear News*, they will be posted on the IBA webpage (www.bearbiology.org).

bearbiology.org). Please review these carefully. Alternative viewpoints are welcome and should be sent to me for distribution to Council. Representative statements for and against the amendments, if received in a timely manner, will be included with the upcoming ballot for the 2007 election of Council members.

Regional Representation Amendment Fails

The recent proposal to amend IBA bylaws failed to be ratified by the required $\frac{2}{3}$ majority of voting members. (This was a separate issue from that above.) This means that existing bylaws governing Councillor elections will stand. As stated under the existing bylaws, this means that 3 Councillors will be elected and that the newly elected IBA Council will have the option of appointing an additional Councillor to achieve regional representation if it is found lacking.

IBA Council Nominations

The Council carries out the day-to-day business required to follow through with IBA goals and objectives to address issues important to bear conservation and respond to concerns of members. The 2007 IBA Nominations Committee, chaired by Piero Genovesi, has done an excellent job in providing a list of enthusiastic candidates for these important positions. Open positions are listed below. The Councillor candidates with the 3 highest numbers of votes will serve on the new Council. No Council member receives compensation or special consideration—these are working positions and each person is required to volunteer a substantial amount of time on behalf of our organization.

President

Chris Servheen
Frank van Manen

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John Hechtel
Karen Noyce

Secretary

Diana Doan-Crider
Brian Scheick

Treasurer

Glen Contreras
Cecily Costello

Councillor (3 positions)

Mike Gibeau
Mark Haroldson
Rick Mace
Martyn Obbard
Michael Proctor
Shyamala Ratnayeke
Jorg Rauer
Ximena Velez-Liendo
Koji Yamazaki
Edgard Yerena

In addition to these candidates, there are many qualified members who may be interested in running for these positions. For this reason, members may nominate others or volunteer themselves. Nominees must be IBA members who agree to run before submitting their names and are willing to work hard on behalf of the association. Maintaining communication with members and within the Council is a must. This is your association and its effectiveness will be a reflection of how you contribute to it. All nominations must be received by IBA Secretary Joe Clark no later than 30 August 2007.

New Web Page

Check it out! The IBA website has a new look and will become even more useful for members and those interested in bear conservation. The opening page includes a different stunning photo of a bear by Jenny E. Ross each time it is accessed. In the near future, it will be possible to join and pay IBA dues online and to get updates on current issues important to bear conservation, management, population status, Bear Specialist Group findings, and connection with *Ursus*, IBA's professional journal. **Anyone planning on attending the conference in Mexico should check the webpage for updates on programs, workshops, registration, and other activities.**

Hosting the Next Americas Conference

Any group or venue that wishes to bid on holding the next Americas IBA conference in 2010 should strongly consider making a presentation to the IBA Council during the Mexico conference. If you do not have a copy of the IBA Guidelines for conference preparation, please contact Mike Vaughan (mvaughan@vt.edu).

Does IBA Have Your Current Email?

Often when it is important to communicate with members we find that email addresses have changed or are no longer functional. Even when physical addresses are current and members are receiving the latest issues of *International Bear News* and *Ursus* we may not be able to reach you electronically. If your email address has changed in the last 4 years, please contact Joe Clark (jclark1@utk.edu) and make certain he has your current information.

North Cascades Grizzlies

The grizzly bear population in the North Cascades Mountains of Washington in the northwestern U.S. may number fewer than 20 animals and is vulnerable to extinction. Connectivity with a population across the border of Canada in British Columbia is poor because of human activities. The IBA Council wrote a letter to the U.S. Fish and Wildlife Service encouraging them to move forward with an Environmental Impact Statement that assesses the need for augmentation of the population to avoid further declines. Council provided similar input for Canadian wildlife officials in the past (www.bearbiology.com/iba/about0/letts.html).

Building Partnerships

What is difficult to accomplish with the resources and energy of one entity often finds the path to success easier and more effective when part-

nerships of many organizations tackle the job. There are several excellent examples of how well this approach functions, but two noteworthy ones are available for Andean bears and for Asian bears.

The "Updated Venezuelan Andean Bear Action Plan (2006-2016)" has been recently released. This document is based on workshops held in 2005 and 2006, and is the product of the joint effort by 8 editors representing 7 different organizations. Although presently available only in Spanish, it will be translated into English if funds can be found. This effort could be copied as a model for regional conservation not only of Andean bears, but for other species in other world regions. Contact Shaenandhoa Garcia-Rangel at sg343@cam.ac.uk for an electronic copy or view it on the IBA webpage.

"Understanding Asian Bears to Secure Their Future" was the culmination of a cooperative effort to assess the status and conservation issues of brown bears, Asiatic black bears, Malayan sun bears, and sloth bears in Asia. This major effort was published by the Japan Bear Network with the help of 2 major funders just prior to IBA's 17th International Conference in Japan. Editors from 18 institutions reviewed the work of over 43 contributors. Compiling this information is important to IBA, the Bear Specialist Group (BSG), the Japanese Bear Network, and those responsible for bear conservation in Asia and throughout the world. For more information, contact Koji Yamazaki, yamako@j.email.ne.jp or Toru Oi, toruoi@affrc.go.jp.

Knowledge of threats to bear populations and assessment of conservation actions needed to meet these threats are crucial steps in maintaining a world in which bears and humans can coexist. Making bear conservation a reality will rely not only on dedicated efforts by our members, but increasingly on our ability to build cooperative partnerships with other organizations and governments. ❁

IBA Grant Programs

IBA's Experience and Exchange Grants Program 2008

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We are very pleased to announce that the Experience and Exchange Grants (EEG) program is open for new applications for 2008. The EEG will enable biologists to participate in inter-project work and training exchanges. Working visits to other projects offer biologists and wildlife managers enormous opportunities for learning, sharing expertise, collaborating in on-site problem solving, technical training and professional growth. Moreover, these

experiences broaden perspective and understanding of the biological and cultural context within which bear conservation programs must operate in different regions.

IBA's EEG program is designed to benefit a wide variety of people. Young biologists seeking specific types of technical training in preparation for their own projects may desire to work on an established project for a period of time. Biologists starting new projects or dealing with stubborn research questions may benefit from hosting a field visit from someone who has dealt with similar questions, problems, or research logistics in the past. Mid- or late-career biologists who have not had previous opportunity to collaborate with biologists from other countries, or who wish to broaden their understanding of bears worldwide, can learn enormously from an international field experience and can benefit host projects by sharing their many years of experience. Bears benefit when biologists spend more time applying shared knowledge and

less time re-inventing the wheel with each new project.

Despite the obvious value of work exchanges, it can be difficult to find support for them. IBA's EEG program will fund travel for participants in well-conceived exchanges between projects. Grants will be awarded once each year through a competitive process based on submitted proposals. The program is looking for proposals for project visits lasting several weeks to several months, in which tangible benefits are identified by both the host and hosted project personnel, and which offer reasonable prospects for on-going inter-project relationships to develop.

Committee members include Ole Jakob Sorensen (Chair, Norway), Glen Contreras (USA), Isaac Goldstein (Venezuela), Petra Kaczynsky (Germany) and Karen Noyce (USA).

Deadline for 2008 applications is December 31st 2007.

More information can be found on the IBA website. 🌿

Bear Specialist Group

Old-style "Non-invasive Sampling"

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Many researchers around the world have been collecting hair and scats to obtain DNA, hoping to gain information about the status of bear populations. This type of non-invasive sampling is not only expensive, but also not always the most fitting to the particular circumstances. Bears leave other sign besides hair and scats.

In fact, other sign, such as claw-marked trees and diggings, is often far more prevalent than scats (which may deteriorate quickly, or become covered by ground litter) and requires no artificial bait or hair-snag device. Old-style naturalists could tell a lot about presence of bears just from the types and incidence of sign. To some extent, in our increasingly technological world, the art of reading natural sign has waned — but fortunately has not been forgotten. In fact, some researchers have made great advances in this form of non-invasive sampling.

Recently, three members of the Bear Specialist Group led a workshop to share their expertise on reading bear sign with park rangers in southern Cambodia. The accompanying article describes how this was accomplished and what they found. Of

particular interest is the finding that the ratio of new-old sign was lower in this portion of Cambodia than observed at other sites in Southeast Asia. Indeed, one of the benefits of sign such as claw-marked trees is that it yields a cumulative history of bear presence, and thus possibly more in-depth understanding than sampling a snapshot in time. On the other hand, that cumulative record can be difficult to interpret, as discussed in the article. The intriguing challenge of interpreting (but not over-interpreting) such data is fertile ground for further research.

The workshop attracted media attention, not just locally, but even around the world. See, for example, the article published in *USA Today*: www.usatoday.com/tech/science/2007-04-26-509396899_x.htm 🌿

Bear Specialist Group

Bear Sign – Survey Training Held in Cambodia

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In April 2007, 25 park rangers and staff from 10 protected areas throughout Cambodia participated in the country's first Bear Sign-Survey Training Course. The course was organized by Free The Bears Fund in

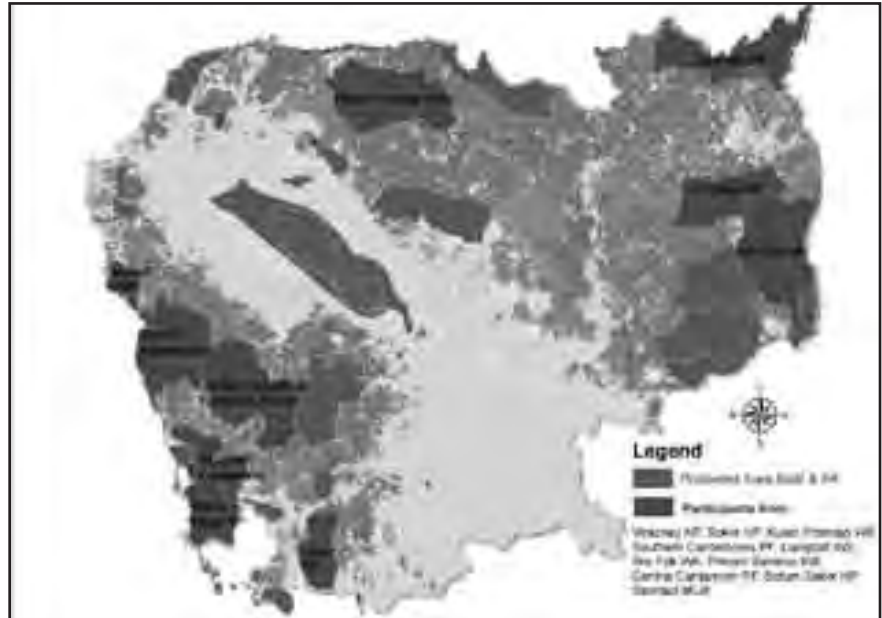


Figure 1: Cambodia, showing protected areas of rangers and staff who participated in the Bear Sign-Survey Training Course, held in Bokor National Park, April 23-27, 2007.

Cambodia and Conservation International, with funding generously provided by Perth Zoo and Conservation International. The Cambodian Forestry Administration and Ministry of Environment, which manage Cambodian protected areas, provided the training venues and helped select participants from different areas (see map Figure 1). Manak Peov (Forestry Administration) and Sun Kong (Ministry of Environment) provided expert translation. Eight international observers from Malaysia, Thailand,

Indonesia, Cambodia, and England also attended, including wildlife biologists and conservationists from the Smithsonian Institute, WildAid and University of Montana.

About 25% of Cambodia's forested land has been designated as protected areas; this is one of the highest proportions in Southeast

Asia. Cambodia's protected areas retain outstanding examples of intact large mammal communities now lost from much of mainland Southeast Asia. Asiatic black bears and sun bears, known in Khmer as *Kla khmum tom* and *Kla khmum toik*, respectively, are among the threatened large mammals that persist in Cambodia's forests. Protection and monitoring of bear populations is an important part of management of these areas.

Objectives of the 5-day training course were to have participants (1) understand the conservation status and ecological role of Asiatic black bears and sun bears in Cambodia and the region, (2) develop field skills to recognize, record, and interpret signs left by bears in the forest, and (3) design and implement bear sign surveys and monitoring in their area.

Because of their solitary, secretive nature, dense forest habitats, and diminished abundance from decades of commercial poaching (for the trade in bear parts), bears in this area are difficult to observe directly; however, their foraging activities produce a wide variety of signs including broken-open logs, raided termite mounds, claw marks on climbed trees,



Vegetation on the plateau of Bokor National Park, Cambodia, where the bear sign-survey training was held.

Bear Specialist Group

and excavated bee nests. Bear signs reflect an accumulated history of bear presence and activities because they persist for many months or even years, and signs are biologically meaningful because of their connection to feeding. Thus, for the trained observer, bear signs present a wealth of information about the status and ecology of bears in an area. Finally, sign survey techniques are low-cost and low-tech, and thus immediately within reach of park managers and rangers who must monitor and protect bears and other wildlife.

Participants spent the first day in the classroom at the Phnom Tamao Zoological Gardens and Wildlife Rescue Center, where 78 rescued bears currently live. Trainers Gabriella Fredriksson and Rob Steinmetz presented photographic overviews of

ing fieldwork in Bokor National Park, 160 km southwest of Phnom Penh. This park encompasses the southern-most mountain range in the huge Cardamom Mountains ecosystem in southwest Cambodia (Figure 1). We established base camp on top of a stunning sandstone plateau that rises steeply from the sea coast to 800 m elevation. The vegetation was an unusual mosaic of expansive rocky savanna and dense evergreen forest. Each day we split into small groups to find, identify, age, and record bear signs. The day's observations were discussed around the campfire.

Participants completed 12 short transects on the plateau, defying the spiny, rattan-dominated understory of Bokor's evergreen forest. We located raided bee nests and trees climbed by bears, and found two old snares

set by poachers to capture large mammals.

Thousands of such snares have been pulled from Bokor's forest over the previous few years. Commercial wildlife snaring and poaching is a huge threat to wildlife in Cambodia and elsewhere in the region, and is largely responsible for the region's increasingly "empty forests".

Interestingly, however, sun bears and Asiatic black bears seem to persist where other large carnivores such as tigers have been extirpated or driven to very low numbers. This pattern is becoming increasingly apparent from recent surveys at many sites in Southeast Asia. Our collective observations at Bokor National Park matched this regional pattern: bear signs were present whereas signs of most other large mammals were scarce or absent. Although not good news for other threatened species, this pattern is

hopeful for bears because downward population trends can potentially be reversed before critical levels are reached (as with tigers).



Bear claw marks on a climbed tree.

The final day of the training was dedicated to data analysis and interpretation. We examined the Bokor sign data in comparison to other sites where intensive sign surveys have been conducted recently (Thailand and Kalimantan). By examining participants' own data in a regional context, the potentially dull proce-



Making a paper tracing of a bear claw mark set, for later measurement.

(1) the conservation status of bears in Southeast Asia, (2) study methods used by bear biologists throughout the world, (3) bear feeding behavior and types of bear signs in Southeast Asia, (4) how to distinguish the claw marks (on climbed trees) of sun bears and black bears, and (5) how to estimate ages of signs. Trainers brought data from their study sites in Kalimantan and Thailand, to illustrate what bear sign-survey data look like.

Participants, trainers, and organizers spent the next three days conduct-



Examining a tree opened by a bear to eat the honey and larva of stingless bees (*Trigona sp.*).

Bear Specialist Group

dures of data analysis was made more relevant and compelling. What did we learn?

- **Mean sign density was 9.6 signs/ha.** This seems substantially lower than in other evergreen forest sites in the region where sign surveys have been conducted (Thailand 30–40 signs/ha, Kalimantan 40–60 signs/ha).

- **Most signs were claw marks on trees (58%),** the remainder raided stingless-bee nests and soil digs for invertebrates. Claw marks tend to be the most common type of sign at other sites in mainland Southeast Asia as well (e.g., Thailand, Lao PDR); claw marks are often associated with feeding on tree fruit. In contrast, most signs in insular Southeast Asia (e.g., Kalimantan) are soil digs, broken logs,



Cambodian rangers comparing bear sign observation.

was recently reduced by poaching, (2) bears only use the plateau evergreen forest for a limited time each year, perhaps when oaks are ripe — strongly seasonal use of an area would result in a single cohort of signs rather than steady deposition of signs, and (3) the result is an artifact of our very small sample

than recent signs. Because bear signs accumulate over time, old signs (> 1 year) typically comprise a high proportion of any bear-sign sample, relative to recent signs (< 1 year). However, compared to other sites (Kalimantan and Thailand), the age structure of Bokor signs was especially skewed toward old signs (see Figure below).

Of course, this information pertained to just a small part of the entire park. But for training purposes we

area. Correspondingly, discussion emphasized the need for large sample areas and numerous transects, and for careful interpretation of bear sign data in the context of other information such as food availability and tree phenology, which affect bear feeding behavior.

Everyone agreed that the combination of sign density and age structure provided a valuable framework for assessing and monitoring bear populations. And it appeared that participants saw the potential usefulness of sign data for management: not only does it help answer questions, but, as importantly, it helps formulate them as well.



Cable snares, such as this one found during the training in Bokor National Park, are partly responsible for Southeast Asia's increasingly "empty forests."

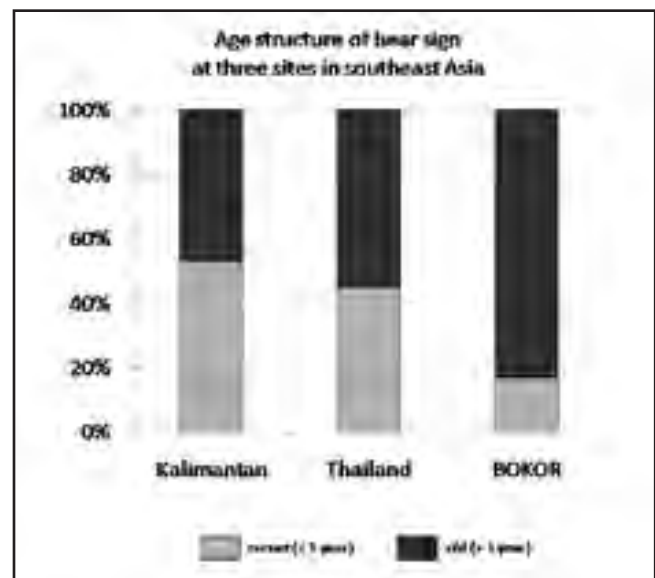
and raided termite nests — related to feeding on invertebrates.

- **Bears climbed at least 7 tree species, but especially oak (*Lithocarpus sp.*),** which appeared fairly common in the evergreen forest here.

- **Most identifiable claw marks on climbed trees were from Asiatic black bears.** This result is consistent with recent camera trapping evidence that suggests Asiatic black bears have a predominantly montane distribution in Cambodia, whereas sun bears tend to occur at lower elevations.

- **Old signs were much more common**

asked participants to think about what these data showed regarding the status of bears here. As an example, we discussed three non-exclusive interpretations about why old signs were predominant in our sample: (1) bear abundance



The training course was intended to increase capacity amongst Cambodian protected area staff to survey bear populations in their areas. But the training course also demonstrated the value of bringing together staff from different ministries and localities throughout the country. Rangers working in diverse environments and under different management conditions had a rare opportunity to exchange their valuable experiences and build confidence. Cambodian rangers tend to have at least one thing in common: they work under difficult, and often very dangerous, circumstances. We believe that the participants returned to their protected areas with a renewed enthusiasm generated by improved skill to read the forest and share experiences with new colleagues.

These newly-trained rangers won't be forgotten upon returning home. Cambodia's own Bear Research Team, led by Conservation International and supported by the International Bear Association (through IBA's research and conservation grants) will follow-up with rangers at different sites to survey the status of bears. Thus, in the next few years we hope to build on this training by developing a network of bear-monitoring sites in Cambodia. These sites would encompass the major forest types and different management conditions of Cambodia's protected area system. This work would inform protected area management by the Cambodian government, and provide a framework for ascertaining which actions work best for conserving Asiatic black bears and sun bears in the region. 🌿

Bear Specialist Group

The Bear Specialist Group (BSG) is organized into species and topical expert teams, each with two co-chairs. These co-chairs, along with some other specialists comprise the coordinating committee, which is listed below.

Coordinating Committee Co-chairs

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Yellowstone's Brown Bears Delisted

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The U.S. Fish and Wildlife Service announced on March 22, 2007, that the brown (grizzly) bear in the Yellowstone area would be removed from the list of species managed by the federal government under the U.S. Endangered Species Act (ESA). This action is reassuring because it is another example (along with that of – notably -- Sweden) that significant recovery of depleted bear populations can be accomplished through cooperative efforts. It also is a demonstration that the ESA can work as intended to prevent the extinction of even difficult-to-manage species like brown bears that require large landscapes and have low reproductive rates.

In North America, brown bears south of the border of Canada were listed as a “threatened” species in 1975. At that time there were fewer than 250 bears left in the Yellowstone area (some estimates were as low as 138). Now there are a conservatively estimated 550, populations in recent decades have been increasing at 4-7% annually, and bear distribution has increased by 48%. This population of bears is the most intensively studied bear population of bears in the world with more than 200 peer-reviewed publications on their biology and habitat (publication list available at: <http://www.nrmssc.usgs.gov/products/igbstpub.htm>). Some of this work was recently summarized by Schwartz et al. (2006).

In the United States, most wildlife species are managed by the governments of individual states. When a species declines to the point where it is in danger of extinction, however,

the ESA provides a mechanism for the federal government to take over management authority for that species. When that happens, federal land management agencies are required to give a priority to the conservation of “listed” species when they make land management decisions. Actions that may result in impeding the recovery of listed species must be reviewed by the U.S. Fish and Wildlife Service; this review may result in stopping development projects on public and privately-owned lands.

Since 1975 when brown bears were listed south of Canada, the state and federal governmental agencies have worked together under the Inter-agency Grizzly Bear Committee and the Fish and Wildlife Service's Grizzly Bear Recovery Coordinator (Dr. Chris Servheen) to engineer the recovery of the species, to meet recovery targets, and to put together management plans that will protect grizzlies and their habitats following delisting in the Yellowstone area. These plans as well as the delisting documents are posted at: <http://mountain-prairie.fws.gov/species/mammals/grizzly/yellowstone.htm>.

Removal of Yellowstone's brown bears is opposed by some conservation organizations and scientists and supported by others (see IBN August and Nov. 2005). Generally, I would characterize the debate among scientists as management-oriented biologists supporting delisting (e.g. The Wildlife Society) and more theoretical biologists opposing it (e.g. The Society for Conservation Biology). The IBA adopted a position that acknowledged the progress that had been made in increasing numbers and protecting habitat but the IBA was neutral on delisting (position available on the IBA website).

There are 3 states (Montana, Idaho, and Wyoming) that now have the responsibility for managing portions of the Yellowstone brown bear population outside of Yellowstone National Park. The U.S. Forest Service has the responsibility to managing

much of the bear's habitat outside of Yellowstone Park. Within Yellowstone Park itself, bears and other wildlife (listed or not listed) are managed by the U.S. Park Service. If the 3 states and U.S. Forest Service live up to the commitments they've made in the delisting package (called the Conservation Strategy and available on the above-mentioned website), then I'm confident that there will be continued progress in brown bear conservation in the Yellowstone area. If these agencies fail to live up to their agreements or if bear populations declines from some other cause, then brown bears in Yellowstone may need to be relisted. Procedures for monitoring, for conducting status reviews and for relisting are specified in the delisting documents on the above-mentioned website.

Some conservation organizations have already announced their intent to sue the U.S. Fish and Wildlife Service to prevent the delisting of Yellowstone's brown bears. It is impossible to predict what decisions the courts will make on this suit but such legal actions come as no surprise to frequently-litigated federal agencies like the U.S. Fish and Wildlife Service. In anticipation of the lawsuit, the final delisting rule is extremely comprehensive and thoroughly explains the data on which the decision was based as well as the remaining uncertainties surrounding Yellowstone's brown bears.

Outside of Yellowstone, U.S. brown bears will remain listed under the ESA. The population of brown bears in the “Northern Continental Divide Ecosystem” (Glacier National Park, Bob Marshall Wilderness area, and adjacent National Forest lands) appears to be doing well and a population estimate for that area by former IBA officer Kate Kendall and her associates is expected soon and probably will show that this area has more bears than Yellowstone's minimum estimate. In 4 other designated recovery areas, however, brown bear populations are not yet recovering.

In these areas, the potential exists to greatly increase the number of bears. This contrasts with Yellowstone where the core habitats appear to be at carrying capacity (Schwartz et al. 2006). Big scoops of progress are possible in these 4 areas while in Yellowstone much of what remains to be done amounts to putting the cherry on top of the sundae.

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The Plight of the Cantabrian Brown Bear

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Rumors of the construction of a ski resort in the area of the San Glorio Pass in the Cordillera Cantábrica of Northern Spain first started circulating many years ago, but became a distinct possibility just recently. Welcome news for the dwindling rural community - a chance to inject some cash into the poor surrounding towns and villages, currently surviving on out-dated industry, failing mining and subsistence farming. The young, as in many country areas, are emigrating to the cities in search of a "better" life.

A few hotels were built in preparation for the influx of downhill skiing lovers. Around the same time, fifteen to twenty years ago, the Junta de Castilla y León (regional council) received large grants from EU economy-boosting schemes such as the European Regional Development Fund

(ERDF) to help the local economies of the impoverished regions.

In 2001 the company "Tres Provincias S.A." was chosen to oversee the building of the ski resort, mostly financed by Palencian, Leones, Cantabrian and Basque country capitals. However, the fact that the area affected by the proposed development is protected under various local and European laws including the EC's Habitat's Directive and Natura 2000 complicated matters. In particular, the proposal as such was prohibited under the "Plan de Ordenación de Recursos Naturales (PORN) del Parque Natural Fuente Carrionas y Cobre-Montaña Palentina". The result was to modify the law to accommodate the proposed development.

This stretch of mountain wilderness in the middle of the Cordillera Cantábrica, around the highest peak of Peña Prieta (2,537m), is particularly rich in wildlife and plant species, the most endangered being the Cantabrian brown bear *Ursus arctos pyrenaicus* (taxonomy currently under debate.). The Cantabrian brown bear is listed in the Spanish list of endangered species as endangered with extinction. There are approximately 140 bears left: the fact that the proposed ski resort is meant to be built right in the middle of the main corridor connecting the two isolated eastern and western bear populations, severely affects their connectivity and exchange of genes. Among the other rare resident animal species are the Iberian wolf *Lupus canis signatus*, European otter *Lutra lutra*, Capercaille *Tetrao urogallus*, Apollo *Parnassius apollo* and Marsh fritillary *Euphydryas aurinia* butterflies.

Apart from the threat of destruction of this unique mountain habitat and the survival of the bears, there are already ski stations closer to and serving the biggest local human populations of Palencia, León, Oviedo, Gijón and Santander.

In 2005 the Plataforma en Defensa de San Glorio (PDSG) was formed by concerned ecologists and environ-

mentalists to support the work already done by Cantabrian brown bear conservationist organizations and to provide a public platform for airing views against the project. With support from almost a hundred associations including the Ursus International Conservation Institute, their aim is to provide truthful information and to promote awareness among the general population of the unsustainability of the project. They also send out regular bulletins of news and organise talks and protest marches.

Climate change patterns question even more the logic of building the ski resort: decreased snowfall and higher reliance on artificial snow machine may not guarantee the financial returns on the investment.

The proposed project, with an estimated investment of 100 million euros, includes various visitor facilities as well as lodging at every entry to the complex, an expansion of existing ski pistes and lifts to 50+km, among other amenities. The proposal has been taken to the European Parliament by a Green party member of the European Parliament, David Hammerstein based in Valencia, which has since stated, along with the Spanish Minister for the Environment, that the proposed project must be compatible with the conservation of the species affected.

A recently published report in *Quercus*, the highly-respected Spanish natural history magazine, has given much weight to the perceived unsustainability of the proposed ski resort project. Two naturalists and members of the Study and Defense Group of the Eastern Mountains of León spent three years between 2004 and 2006 monitoring the behavior of bears in the potentially affected area. Various family groups and lone males were found to be habitually present feeding on the abundant wild fruits and nuts and marking territory, proving the zone to be of vital importance to their continued survival.

Recent television documentaries and news reports have raised the

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profile of the debate while possible alternative plans for rejuvenation of local communities are being submitted to the Junta by a union of ecology groups, namely Seo/Birdlife, WWF Adena, Fapas and the Fundación Oso Pardo. Exhaustive environmental impact assessment reports have been prepared by the opposition. The plans compiled by Tres Provincias are also (finally) in the hands of the Junta de Castilla y León who say it will take ten months before any conclusions can be made.

Meanwhile I have started a petition (with the support of the PDSG) in English that can be signed online at www.thepetitionsite.com

[com/takeaction/418999897](http://www.thepetitionsite.com/takeaction/418999897) with the aim of further raising international awareness of the threat to the survival of the Cantabrian brown bear and will send it to both the EU and Spanish Ministers for the Environment.

The latest news is that the revised (because the area chosen for the ski resort project, i.e. the corridor between the two bear populations, was not classified as "Área Crítica") Plan for the Recuperation of the Cantabrian brown bear of Castilla y León has gone for approval to La Junta de Castilla y León, the very same people that are backing the proposed development.

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- www.fapas.es (Fund for the Protection of Wild Animals)
- www.mma.es (Spanish Ministry for the Environment)
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- Quercus (May issue) published by América Ibérica 🇪🇸

Eurasia

The Status of Brown Bears (*Ursus arctos arctos*) in the Italian Central Alps

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The population of brown bears in Trentino, the result of the reintroduction project carried out since 1999 on the Italian Central Alps, continues to expand. This last spring we were able to witness the thirteenth reproduction and there have now been a total 27 cubs born in the last six years in the Natural Park Adamello Brenta and surrounding areas.

The bears released in Trentino as part of a project called "Life Ursus" have adapted well to their new territory as evidenced by this high reproduction rate. However, closer analysis

of this population which now consists of approximately 25 bears has raised some concerns.

A genetic monitoring project, promoted under the auspices of the Forest and Wildlife Service of the Province of Trento, as of 2006 had been able to detect the presence of only 4 of the original 9 "founding" bears (captured in Slovenia between 1999 and 2002 and released in the Natural Park Adamello Brenta). One of these bears a female named "Jurka" was recently trapped and permanently removed from the wild because of her "problematic" behavior. There are now only three of the original "founding" bears remaining bears in the wild. From a genetic standpoint the remaining population would not appear to be healthy. In fact, the majority of the cubs born

in Trentino in the last years were fathered by one male (Joze" 13 years old) and the risk of genetic depression from inbreeding may be quite high if no preventive action is taken. According to the data derived from the genetic monitoring, there are only two sexually mature males. Additionally, we witnessed the reproduction of two 3-year old females, which gave birth to the second generation cubs ("grandchildren" of the bears reintroduced from Slovenia). What is the future for the bears in the Italian Alps?



Jurka at the time of her release.

© Parco Naturale Adamello Brenta (PNAB)

By analyzing the causes of death (proved or assumed) of 11 bears, it was discovered that four died of natural causes (2 died under an avalanche, one cub was preyed on by an eagle and one fell in a crevice), one disappeared (an adult female vanished in Austria in 2002) and six most likely died for human causes (2 were removed legally – JJ1 removed in Bavaria and Jurka captured in Trentino - and 4 likely poached). While stochastic events on such a small population pose a great threat, the lack of social acceptance for the bears is an even greater threat. The population of bears is expanding beyond its current boundaries and the fact that the territories that are being slowly re-colonized are not very well prepared for the return of the bear is a great concern for their future survival. Examples are JJ1, which made it into Germany, as well as the bears spotted in the last two years in the province of Brescia (west from Trentino) and Switzerland and the uproar they caused.

The hope is that in the near future, experience acquired in the areas where it has been possible to establish a positive relationship between humans and bears can provide an example to alpine areas that bears may re-colonize in the future. ❁

Scandinavian-Greek Cooperation

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The Scandinavian Brown Bear Research Project (SBBRP) has begun cooperation with Frank Rosell from the University College in Bø, Norway on chemical communication in brown

bears. Frank has worked for several years on chemical communication in beavers. For this reason members of the SBBRP visited Alexandros Karamanlidis in Greece to learn more about bear marking behavior. The brown bear population in Greece is endangered, and Alex has developed a method to estimate the distribution of the bear range by using bear marking behavior on electric power poles (see Karamanlidis et al. 2007. Using sign at power poles to document presence of bears in Greece. *Ursus* 18/1).

We traveled from Athens to Alex's study area in the Pindos Mountain Range in northwestern Greece. Our base station was a local hotel (fantastic food!) in a spectacular landscape. For a week we followed Alex on his sampling route through the mountains. Power pole-related markings were usually either, mud smears of footprints, back-rubbing, bite and clawmarks. Some poles are used to such an extent that the electricity company has to replace them at regular intervals. Electric power poles in Greece seem to be a preferred marking spot for brown bears, maybe due also to the fact that they are treated with a strong-smelling and sticky substance called Kreosot. Several other signs of marking behavior (e.g.: "tree-beheading") as well as tracks and scats were found in association with the marking of poles. During the course of his study and through the genetic analysis of hair samples, Alex discovered that it is primarily males that use these poles for marking purposes. However, photo and video showed that females (with cubs) also pass by and inspect these poles. The purpose of our trip was to learn more about marking behavior of brown bears and we considered it therefore to be a complete success. In addition, during long evenings (often with some assistance from the local red wine) we discussed ideas for further Greek-Scandinavian cooperation. Visit Greece – and you will never look at electric power poles the same way again! ❁

Methods of Brown Bear Censuses in Russia

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In Russia the brown bear range occupies an area of approximately 13 million km². The diversity of habitat across the species range is extreme, from arctic tundra in the north to subtropical habitats in the south and swampy plains in western Siberia to forests in the Caucasian and Sikhote-Alin mountain areas. Human population density fluctuates from 0.2 to 100 people/km². Habitat carrying capacity throughout most of the bears range is low with large fluctuations in bear foods from year to year, prompting bears to move great distances in search of food.

Due to the relatively low bear densities and movement of bears across large areas in search of food, estimation of bear numbers is not easy. Precise estimates derived from one area cannot be applied to neighboring areas. The State Service of game animal census ("Gosokhotuchet of Russia") was established in 1979. However, since that time officials have become acutely aware of the necessity to modify the methods for estimating bear numbers for such large territories as well as improve on the estimates of carrying capacity. As

a result the "Methodical Guidelines on Brown Bear Censuses" were officially developed (Gubar', 1990).

Many methods for counting brown bears are expensive and time consuming and therefore the Russian game management agency cannot use them. For example, marking bears with radio transmitters and genetic analysis of hairs found on trees and fences are not used in Russia.

There are some general mandatory principles for counting bears that local hunting managers have to follow in addition to some methods adapted to local conditions. It is extremely important to organize methods and reporting by the existing hierarchical structure (with feedback) for collecting information on bears. At present, data collected by those directly working in bear habitats is delivered to the "District Services of Game Animals Census" (lowest administrative units in Russia). Then these data are sent to the regional services (in Russia regions are similar to the states of the USA) and finally to the "Control Information-Analytical Center" of game animals and their environment" (in Moscow). As a part of this process each upper level division can correct or ask for explanations of data from the lower level divisions. Typically reported estimates of bear numbers rarely fluctuate. When managers of in upper level divisions discover sudden changes in reported bear numbers in a region or district, they can require the data to be checked the following year. As a result some managers may simply adjust the new data to those of the previous year.

Before undertaking a census, each territory is first categorized as one of four types based on the availability of experts to conduct the survey; a) a territory with the human and financial capacity for a complete area census, b) territory for which a significant portion of the area can be covered by a census but which extrapolation is applied to the remaining area, c) territory without capacity to conduct a census but that due to its similarity to

surrounding areas extrapolation from data in those surrounding areas can be used, and d) territory where capacity and extrapolation from neighboring areas are not possible estimates are therefore not possible.

Mapping of all data on estimates is mandatory for each level, despite differences in ability and the methods employed for counting. Although, the differences in methods employed is taken into account in the reviews of these estimates. For example, the methods used to count bears along rivers during mass spawning of salmon are quite different from methods employed during spring counts of bears in sub alpine zones (in areas without snow and exposed to bright sun).

The following is a list of methods utilized across the different territories in Russia:

1. Hunting managers, mountain rangers and hunters are used to count places where there are bear tracks and feeding sign. They measure the width of bear tracks when present. These data are collected over a number of years and placed on maps. Each expert uses a questionnaire which has been developed by bear experts. Additionally and simultaneously experts conduct surveys with local people.
2. Tracking of bears in the spring. This method is time consuming and limited by location and weather conditions of the area. Bear tracking is usually only conducted between the time bears leave their dens and the winter snows begin to melt. However, despite its limitations the method is usually quite effective and provides definitive data on the presence of bears'. It is also important in that if conducted properly can provide experts with information on the location of bear dens. The method requires very good information on an area and in general such methods can therefore only be employed in nature and hunting reserves that are well staffed with people knowledgeable of local bear populations.

3. The identification and counting of bear tracks in late autumn snows just prior to the time they enter their winter dens. This method is suitable for areas greater than 100 km² in area because bears often have to travel large distances from their summer habitats to get to denning areas. This method can also be utilized successfully in years when food resources are abundant and therefore delay the denning of bears which in turn leads to their roaming and leaving obvious track sign long after the snows have fallen.

4. Visual counts of bears in open landscapes (e.g. tundra areas of Siberia and the Russian Far East). This method was often used in the middle of the 20th century. In such landscapes aerial counts from planes or helicopters are very effective.

5. Counting bears in cropland. This method is more effective in the years when there is a shortage of natural foods. For example in Central European Russia a shortage of raspberries (*Sorbus aucuparia*) and cowberries (*Vaccinium vitis-idea*) is very unfortunate for the bears and leads to their utilizing croplands for food.

6. Counting bears on river shores during spawning of salmon fishes. This is a method commonly employed in the Russian Far East where there are plentiful salmon runs on many of the rivers in the area.

7. Counting bears (individually recognized because of their sex and age) in small nature and hunting reserves. This method is very difficult and possible only if highly qualified experts are present.

8. Counting trees marked by bears. This method is effective only in some localities (Puchkovsky, 1991).

The last four methods are most suitable for counting bears in small areas and the data obtained can be extrapolated to larger territories only when there is a good similarity of these areas with the surrounding territories. However, extrapolation of data that are collected as a result of bears concentrating near temporary



Bear numbers in 2006 in Russia. Numbers of bears are given for the main administrative divisions of Russia (Federal Okrug).

food resources are at risk of leading to underestimation of bears. For example, in the areas of Central European Russia where croplands attract bears a significant portion of population may avoid these artificial food resources and are therefore subject to not being counted.

Ultimately no matter how bear numbers are estimated the "Control Information-Analytical Center" of game animals and their environment processes all the data. This center publishes a report with the results of annual censuses for all of Russian territories (Gubar' 2004). For the period 2000-2003, the total estimated number of brown bears in Russia ranged from 125 000 to 140 000 (Fig. 1 presents data on estimated bear numbers in different parts of Russia in 2006 (total 163 000).

Unfortunately, as of last year the management of hunting reserves in Russia ceased. As a result submission of regional estimates into the "Control Information-Analytical Center" of game animals and their environment may also cease bringing with it an end to the system used over the past 20-30 years to provide estimates on bear numbers in Russia. Such data are critical to monitoring trends in the brown bear population of Northern Eurasia.

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Workshop Held in Russia: bear species rehabilitation, release and monitoring

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The 1st International Workshop on rehabilitation and release of orphan bear cubs was held on 26-31 May 2007 in the Tver region, approximately 450 km northwest of Moscow. The venue of the meeting was the headquarters of the Orphan Bear Cub Rehabilitation Project (OBRP) founded by Valentin S. Pazhetnov, in the abandoned village of Bubonici. The area is located in the southern Russian taiga; an area with very few people, unpaved roads, many beautiful lakes, bears and other large carnivores.

The meeting was organized and sponsored by the International Foundation for Animal Welfare (IFAW). John Beecham was among the organizers. 50 participants from 13 countries reported on their work and experiences with 7 of the world bear species. The impressive record shows that roughly 600 bears are released every year in the world. The workshop had five sessions:

1. Criteria for accepting orphan bear cubs into rehabilitation programs;
2. Care and rehabilitation – critical moments and components;
3. Criteria for making decisions about the suitability of bears for release;
4. Release and post-release monitoring; and
5. Public outreach and education.

Participants agreed to publish the proceedings of the presentations and the workshop results. Upon invitation I presented personal opinions on the limitations for the release of bears



raised in captivity and stressed the need to reduce situations that lead to orphaned cubs, as well as the need for serious post-release monitoring. I also informed the audience on the general work of the IBA including the fact that the IBA has not reached a consensus on captive bear releases. ❁



Environmental Education Program “Fronti The Guaro Bear Goes to School”

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Venezuela is considered one of the countries with the greatest biodiversity, which includes the so-called “Andean” or “Spectacled” bear (*Tremarctos ornatus*). The Andean bear can be found in the following provinces: Táchira, Trujillo and Mérida; in Lara it roams habitat around the towns of Andrés Eloy Blanco, Jiménez, Iribarren and Palavecinos. “Native Bear”, “the Savage” and “Ucumari” are some of the other names the Andean bear is called.

Andean bears are threatened by several activities, which include illegal hunting, habitat destruction and lack of knowledge within the affected communities of the existence of this

species: all reasons why today Andean bears are very vulnerable. They are classified as Vulnerable on the IUCN Red List 2006 as well as listed on Appendix I of CITES. They are also protected under

the Venezuelan National Constitution, Biodiversity Law, Wildlife Protection Law, Decree No. 1485 and Decree No. 1486.

In 2002, in the Province of Lara, an Andean bear claw was found in the Cubiro mountains, which provided, for the first time, evidence of the presence of Andean bears in that area. That discovery stimulated great interest, including research and visits sponsored by the Frente Ecológico de Cubiro (FEC) and the tourist group “Los Frontinos de Cubiro”. As a result, on March 12 2003 the Province of Lara launched a Conservation Plan for the Andean Bear (“Plan Integral de Conservación del Oso Andino” or PICOSO), which promotes research, education and conservation of Andean bears in the province.

A number of activities are taking place aimed at the conservation of Andean bears and they include the following:

- Shaenandhoa García Rangel, a PhD student in the Wildlife Research Group at Cambridge University is doing her research on the “Estab-

lishment of the distribution, habitat and landscape use of the population of the Andean Bear in Portuguesa Mountain, Venezuela”;

- The Fundación para la Defensa de la Naturaleza (FUDENA) runs a project sponsored by WWF USA with respect to the “Establishment of Biological Corridors in Portuguesa Mountain, Venezuela”; and
- Outreach and research as part of the implementation of PICOSO.

Once all these activities are carried out, it will be necessary to evaluate the strategies needed to conserve the species and its habitat, given the existing landscape. Waldo Lovera, a local teacher who is at the head of the Cairo Ecological Front has, among others, initiated a number of environmental education activities in Cubiro. However, there are still few education activities being conducted. That is why we came up with programs such as “Fronti The Guaro Bear goes to School” aimed at children in Cubiro and Diego de Lozada communities of Jiménez as well as the Las Cuibas and Agua communities of Palavecino (Province of Lara, Venezuela). The



program involved visiting educational institutions and reaching out to students (more than 3500) and the communities at large.

To begin, we visited the Bolivarian school

“Evelio José Aponte” in Cuibas and the community of Agua Viva in the Palavecino Municipality and organized activities teaching about the species living in Terepaima National Park. We called that

part of the program “The Little Savage is our Friend, let’s Take Care of Him” and 210 students participated. A research team consisting of 3 students from Yacambu’s University held a teacher workshop where they offered support materials, pictures and videos of Andean bears. The Andigena Foundation led a program called, “The Andean Bear goes to School”. The resulting reports were presented during the Environmental Education class at Yacambu’s University.

The success of the initiative in Las Cuibas prompted the desire to replicate it in Cubiro and Sanare. There, we organized a series of hands-on activities such as “Playing, learning to know the bear”. This program won a contest called “100 ideas for Barquisimeto” and was publicized in one of the Impulso magazines.

The program was also publicized in the *International Bear News* (“Fronti, the Andean Bear goes to School” Vol. 13, No. 4, p. 28, 2006). Other press that covered the program includes: Gala magazine (“Saving the bear”), Okey magazine (“The Andean Bear, a guaro who wants to live”), El Nacional (“In Lara the Andean Bear is protect-

ed”), Gente Uny of Yacambu University (“Lara The Paramus where bears sleep”) and the Ucamari newspaper of Barquisimeto.

Presentations were made in



Barquisimeto with the support of Yacambu’s University and FUDENA, as well as an exhibition at the International Fair of Barquisimeto (2005), thanks again to Yacambu University.

A number of other educational activities followed “Fronti The Guaro Bear goes to School” and they include

- Visits to the study area and creation of a project called “Taken care of the forest, we protect the Bear” to avoid the destruction of the bear’s habitat by agricultural activities;
- Meetings with community members and environmental groups to stimulate environmental agendas and the creation of a project called “Oso Adentro” as well as others;
- Educational conferences in the Bolivarian school “Augusto Graterol Partidas” and the Bolivarian high school of Cubiro, aimed at supplying information about the species and assessing, through a questionnaire, the level of knowledge of students. It turned out that students know about the problems with Andean bears and their habitat and are

well intentioned to dealing with them; what they lack is the institutional and financial support to address such problems; and

- Activities for toddlers “You know the Andean bear”, including the showing of an Andean Bear video.

The activities above were presented by Imarú Lameda and supported by Yacambu’s University and the Cubiro’s community, including local schools, institutions and environmental groups. ✿

Are Andean Bears Predators of Mountain Tapirs?

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In the cloud forests and paramo (high altitude grassland) regions of Ecuador, very few people have had the experience of seeing an Andean Bear (*Tremarctos ornatus*) pursue cattle for consumption.

Although many people familiar with the Andean Bear have doubted reports of bears attacking livestock, on April 22nd 2007 I personally witnessed this behavior in the Yanahurco region. I was accompanied by a BBC film crew which included Jeff Goodman (cameraman), Jake Drake-Brockman (sound recorder), and Angel Garcia-Rojo (assistant producer).

While filming for the Natural World documentary series we saw an adult bear chasing a herd of wild horses, possibly in search of a juvenile, weak, injured or old individual as easy prey. Unfortunately, we could not

film this remarkable occurrence, as it happened very quickly and the filming equipment was not set up. Later, the chased horses dispersed between the nearby cattle; the bear seemed to concentrate more on the cattle, chasing it for over 4 km, after which it stopped for a moment. The bear repeated this chasing behaviour several times in a test of resistance that ended with the weakest cow becoming the bear's prey. We did not see how the bear caught its prey as during the charging phase it disappeared into the rolling hills and thick brush.

The following day, in another area of the Yanahurco region a 7 person-team including myself, saw a bear stalking a cow in the paramo. This time, the cattle's tried to escape from the bear by getting inside thick bushes of the paramo. However, this did not deter the bear from chasing it down through the vegetation. Once again we were unable to determine whether the bear managed to prey on a cow as the cattle disappeared into thick vegetation at a long distance from our position.

Although all these experiences were very surprising to me, I was more surprised when we went to investigate Andean bear predatory behavior in the Cosanga region of northeast Ecuador. Here we met Mrs. Rosa Chup, who lives in the SierrAzul reserve. She told me of an experience she had a couple of months before. While fishing she heard heavy breathing close by. Startled, she turned rapidly towards the noise and saw a large mountain tapir (*Tapirus pinchaque*) in the vegetation. The frightened tapir ran away with damaged and bleeding hooves. Seconds later an enormous Andean bear came into sight in pursuit of the tapir. Upon seeing Mrs. Chup, both animals stopped and each, frightened by her presence, headed different ways back into the forest. In this case there were no more accounts to back up Mrs. Chup's experience, but I believe her story after having heard similar reports in the same region some years before. Additionally, I have

found Andean bear scat filled with tapir remains. However in that case I believe the tapir was eaten as carrion.

All this evidence points me to the hypothesis that the Andean bear may occasionally prey on mountain tapirs and even did so centuries ago, before the era when the Spanish colonials introduced cattle to the South American continent. 🦁

North American Black Bear Survey Published in *Ursus*

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Personnel from Washington Department of Fish and Wildlife recently completed a survey regarding black bear management in North America. Below is the abstract of the manuscript that has been accepted by *Ursus* and will be published later this year.

How Agencies Respond To Human-Black Bear Conflicts: A Survey Of Wildlife Agencies In North America.

Managing interactions between humans and American black bears (*Ursus americanus*) has evolved from public feeding and viewing of garbage-habituated bears to nationwide bear education campaigns focused on removing food attractants. We conducted a self-administered electronic survey questionnaire to assess how wildlife agencies respond to human-bear conflict and identified techniques currently used to manage conflicts throughout United States, Canada, and Mexico. Forty-eight agencies responded to the survey and provided answers about current bear populations, levels of complaints, types of

interactions, and agency responses. Major findings include: 1) seventy-five percent of agencies relocated problem bears, but only 15% believed relocation was an effective tool, 2) fifty percent of agencies always marked problem bears that were captured and released, 3) fifty percent of agencies both monitored the results of relocated bears and maintained a database, and 4) sixty-nine percent of agencies ranked garbage/food attractants the most common type of human-bear conflict. Our results suggest that management components that have the most potential for improvement likely include: 1) marking, monitoring and maintaining a database of released bears, 2) transitioning from a reactive to a proactive approach for garbage management, 3) developing a comprehensive bear education program that strives to make education a more dynamic and interactive public process, and 4) implementing a system to evaluate the effectiveness of the various approaches for preventing conflict. 🦁

Alaska

News from Alaska provided by:

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NPS Alaska Region Bear Aversive Conditioning Workshop

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The Alaska Region of the National Park Service completed a Bear

Aversive Conditioning Workshop from April 2-6, 2007. The training cadre included national and internationally known experts, several of whom are members of the International Association for Bear Research and Management (IBA). Dr. Steven Herrero Professor Emeritus, University of Calgary presented on brown and black bear natural history, habituation, and preventing negative interactions with bears; O. Lynne Nelson, DVM, MS, Associate Professor, Washington State University, presented on Operant Conditioning of bears; Dick Shideler, Area Biologist, Alaska Department of Fish and Game presented on methods and experiences with aversive conditioning and hazing brown bears on the North Slope and using his Karelian Bear Dog, Kavik; Kim Delozier, Wildlife Biologist, National Park Service from the Great Smoky Mountains National Park presented on aversive conditioning and hazing of black bears; Angie Southwold, NPS, Alaska Regional Office, GIS Information Resources Team presented the Alaska Regional Bear/Human Information Management System (BHIMS); Scott Taylor, NPS Special Agent, Alaska Regional Office presented on bear pepper spray use; Pat Owen, Wildlife Biologist, NPS, Denali National Park presented on bear pepper spray and Integrated Pest Management issues; Chris Bockmon from the Solicitor's Office, Anchorage Alaska joined by teleconference to cover legal issues; and Dr. Terry D. DeBruyn presented on the principles for changing bear behavior.

The timing of the workshop was excellent as several National Parks in Alaska are in the process of updating bear management plans, and including sections on aversive conditioning. The training was held at Denali Park and Preserve. There were participants from Denali, Glacier Bay, Katmai, Kenai Fjords, Klondike Gold Rush, Lake Clark, Yukon Charley Rivers-Gates of the Arctic, and Wrangell St. Elias National Parks and Preserves,

along with the U.S. Fish and Wildlife Service. The Workshop achieved a goal of integrating effort between the Ranger and Resources Divisions. The Alaska Region feels it now has well-qualified individuals to successfully implement this component of bear management when it becomes necessary. There was both intensive classroom and range training. Attendees were required to successfully complete three different real-life scenarios and explain their decisions.

The objectives of the workshop were to:

1. Provide participants with the most current thinking regarding bear behavior, bear management, operant conditioning, and techniques pertaining to effective aversive conditioning of bears.
2. Prepare participants to train others in aversive conditioning techniques.
3. Teach participants hands-on how to work as a team to effectively implement aversive conditioning of bears.
4. Provide participants with clear decision criteria to determine when and what action must be taken against a bear and how to implement a given level of aversive conditioning, ranging from the least to the most severe actions to ensure that the causes of problems are addressed. ❁

Louisiana Black Bear Reintroduction Project

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In 1992, the Louisiana black bear (*Ursus americanus luteolus*) was listed as a threatened subspecies under the Endangered Species Act. Since 2001, a cooperative coalition of public and private groups has been working together to help connect the bear population through a reintroduction project. The 2007 reintroduction team consisted of the Black Bear Conservation Committee, Louisiana Department of Wildlife and Fisheries, U.S.D.A. Wildlife Services, U.S. Fish and Wildlife Service, and The University of Tennessee. The project moves bears out of a dense subpopulation to suitable habitat where few bears are present, thereby creating a new subpopulation. The ultimate goal is to encourage genetic exchange between existing subpopulations. Adult female bears and their cubs are moved from their natal dens to artificial dens in the reintroduction area using the winter release method originally developed by Pennsylvania Game Commission.

Louisiana Department of Wildlife and Fisheries contracted Dr. Joe Clark with The University of Tennessee to conduct a comprehensive investigation of the reintroduction project as well as population dynamics studies. A PhD candidate, Danny Gammons, is conducting the reintroduction investigation. Graduate students Mike Hooker and Carrie Lowe will conduct the population dynamics studies of the Tensas and upper Atchafalaya River Basins. These population studies directly address the delisting criteria in the U.S. Fish and Wildlife Service Recovery Plan.

Since 2001, 36 adult females and 82 cubs have been moved to the reintroduction area. The reintroduced females have been monitored extensively and most have stayed in and around the target area. Ten new litters



University of Tennessee graduate student Carrie Lowe maneuvers a female Louisiana black bear as it is lowered from a winter tree den. (Photo by BBCC).

have been produced in the release area since 2005.

In addition, several bears have been identified as adults that had been moved in the area as cubs. Anecdotal information from hunters and farmers in the area indicate bear sightings are increasing every year.

Reintroductions will continue until population models produced by Danny Gammons research indicate a viable population has been established. New areas are also being considered for future reintroduction projects. To find out more about the Louisiana black bear and how to help support their recovery, visit the BBCC at www.bbcc.org. 🐾

Educating North Carolina's Citizens about Black Bear Issues and Management

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The North Carolina Wildlife
Resources Commission (NCWRC)

is implementing a long-term effort to educate North Carolina's citizens about black bears. A made-for-TV documentary, *The Bear Facts, The Story of a North Carolina Treasure*, was released in 2004 and targeted general adult and teenage audiences on statewide TV as well as DVD/VHS. In 2007, NCWRC released an Interactive DVD (IDVD) called *The Bear Facts, The Story of a North Carolina Treasure, Interactive Educator's Edition* which expands on the original documentary. The 2007 IDVD was designed to inform teachers, other educators, and students about black bears in North Carolina. The 2007 IDVD contains the original 2004 documentary plus new interactive features for younger children and will be provided free of charge to any educator in North Carolina upon request. Segments of the documentary cover black bear history and biology, black bear research and monitoring, coexisting with black bears, North Carolina's black bear hunting, and the future of black bears in North Carolina. These segments are primarily designed for adult and teenage audiences. New features in the IDVD include optional formats that give the educator the ability to tailor the documentary presentation for different classes by showing the 5 segments as "episodes" or as a feature-length documentary. Additionally, there are eight interactive functions, most suitable for children in grades K-12, that engage students on key topics:

1. Are Bears Dangerous?,
2. Bear Management,
3. Explore a Bear,
4. Wildlife Extras,
5. Black Bear Facts,
6. Meet the Experts,
7. Meet a Bear Hunter, and
8. Take a Bear Quiz.

A CD containing lesson planning materials and additional bear information accompanies the IDVD. Materials on the CD include:

1. A Black Bear Profile,
2. A glossary of terms,

3. Maps,
4. Dozens of Bear-related Activities,
5. Discussion of the fascinating hibernation process,
6. Lesson Plans for grades K-12,
7. A Spanish Translation of the original documentary, and more.

NCWRC has partnered with the State Department of Public Instruction (DPI) to advertise and promote the IDVD. Information about how to obtain the free IDVD is available to any public school teacher in North Carolina, and at least one county school system has adopted the IDVD as a part of all science curriculums for middle and high school. NCWRC promotes the IDVD through press releases, its website, and its monthly wildlife magazine. Efforts are being made to inform home schools, private

schools, museums, and other educators about this free learning resource. NCWRC Conservation Educators are promoting the IDVD in workshops, at education conferences, and at NCWRC Wildlife Education Centers in all 3 administrative regions of North Carolina.

NCWRC's goals are to inform adults, educators, and children about North Carolina's black bear issues, to provide bear safety tips, to explain bear management, to address bear-human interactions, and to clear up myths about this state treasure. The documentary program contains excellent footage of black bears in North Carolina and interviews with bear experts. It has aired in major TV markets including Asheville, Raleigh, and Wilmington as well as on state-wide public television numerous times

since 2004. We have tested the 2007 IDVD with approximately 80 North Carolina school teachers and with DPI and received resounding support. While the 2004 documentary continues to air on TV throughout the state, over 2,800 copies of the 2007 IDVD have been distributed to educators as of June 2007. We expect to reach as many as 10,000 teachers and educators over the coming two years with the IDVD as this educational effort progresses. By targeting educators, dozens or even hundreds of students in grades K-12 may be exposed to each IDVD distributed. The documentary and IDVD represent steps in a proactive strategy to inform North Carolinians about black bears and foster public understanding and support for NCWRC bear management efforts. 🦁

Student Forum

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Supervising Your Own Project – Your Bus Ticket to Success!

I recently returned from my second 3-week trip through the western U.S. and to Montana with 19 of my sophomore/junior wildlife students. The goal was to pattern the Lewis & Clark expedition by creating a "Virtual Journal" using advanced GIS/GPS technology, and documenting landscape patterns and wildlife populations. We visited Arches, Yellowstone,

and Glacier National Parks; we visited buffalo jumps and the Lewis & Clark Discovery Center, we saw Mexican spotted owls, grizzly and black bears, wolves, mountain goats, bighorn sheep, and a host of other critters. We took 3 vans, traveled 6600 miles, had a snowball fight at the highest road point in the Rocky Mountains, and spent a lot of the USDA's money. However, the students learned more than they would have learned in 5 years of class work, enjoyed the experience of a lifetime, and are now being placed within the USDA agencies for summer internships. While some of you are thinking that I must be insane to tackle such a venture, both trips actually went off without a hitch, with nary a complaint from hotel owners or guests, not a single act of violence, and no fatalities (not even a scratch). How were we able to make it run so smoothly? I just have this really pleasant way with the students, I bake cookies for them every day, I tuck them into bed every night, and

they expectedly respond just like little angels. *And if you believe that, I have a great piece of mosquito-free ocean side property for sale here in South Texas.*

Let me tell you how it really worked: I gave them a 10 page syllabus with a list of rules a mile long during a full day training session prior to the trip. These rules included things such as no talking back to supervisors, lights out by 10 p.m., no alcohol – not even a whiff, van loading times to the minute, no cell phone use in the vans, and no Big Gulp drinks during driving time. We even provided guidelines regarding whining, complaining, arguing, body odors in the van, or being picky about the food. I then stated that any infringement upon these rules would result in an automatic *bus ticket* home, an F in the class, and a trip to the Dean's Office. Eye's bulged as they realized that the all expenses paid trip of a lifetime teetered on the brink of extinction if they even rolled their eyes at me. The



Are you an IBA Student?
Then you need to belong to the
Student Forum List Serve!

- For students only
- Discussions pertaining to bear biology, management, or study design challenges
- Assistance with proposals and study design through IBA professionals
- Job searches, announcements, information regarding the IBA and student membership
- Planning for IBA student activities and meetings
- IBA membership is *encouraged*, but not required for initial sign-up

Instructions

- Contact Diana Doan-Crider at d-crider@tamuk.edu to enroll
- After enrollment, go to: <http://aristotle.tamuk.edu>
- Click on *Agricultural Lists*
- Click on *Truman*
- Enter your email address and the password "*Bears01*"
- Go to *Create Message*
- If you're a new member, please submit a paragraph about your project and include your contact information so we can all get to know you.

**New IBA Students -
Sign Up For
Student List Serve (Truman)
Now!**



Other Important IBA Student Links

- www.bearbiology.com
- Global Bear Research Program Links page — <http://www.bearkeepers.net/GraduatePrograms.htm>

students were then required to sign the agreement.

Now, this is an extreme case, but when you're all packed into close quarters for thousands of miles, and have a tedious schedule to meet every day for 3 weeks (without a break), one small incident can easily ruin the whole trip. Not only that, but I was taking students white-water rafting, into grizzly country, hiking in the desert, and driving in states that no longer posted speed limits. These rules also meant safety for everyone. My policy was to keep a tight lid on the entire trip, and not allow anyone to venture across the line – not even an inch. Over time, the students learned to follow my rules as a habit, and the rest was all downhill from there. There was still an occasional need to call somebody to the carpet and whisper (or scream) the word bus ticket, but overall, the need to micro-monitor became less, and I was able to really enjoy the trip along with everybody else. I even gave the hotel owners permission to use the bus ticket trick, and during the duration of both trips and about 40 different hotels, we didn't receive *one* complaint about noise or bad behavior. Not bad for a bunch of Texan wildlife students who generally don't start having fun until someone is bleeding.

So what does my trip have to do with your research project? During your time as a graduate student, *yes*, you will be introduced to the world of supervision. While this might be more than you bargained for, it's a reality, and kind of comes with the territory. Much like puberty, you will find yourself dealing with an onslaught of emotions as you tackle the overwhelming task of accomplishing your field research, meeting project and funding deadlines, answering to your own supervisor/advisor, and hoping to maintain a little bit of sanity! Pile on a bunch of young freshmen or sophomore students that signed on with a generous conservation NGO that pays you for using their youngsters, and *voila*, you've got yourself

a migraine. Being a supervisor is a tough job! While I wouldn't necessarily recommend that you manage your research projects with the bus ticket trick (unless you find yourself supervising another Texas chain-gang and confined to small quarters for 3 weeks), there are some good suggestions here that might help you manage your summer help without any risk to your mental health. And take note that I am not responsible for the responses of any individual or agency to the bus ticket trick or any other suggestions in this column:

1. Learn to communicate effectively.

If this is a problem for you, then you may want to take some motivational classes or hire a professional mediator for your project. If you are not a communicator, then you can pretty much count on having some serious problems on your project. I once worked on a study whose leader was not very effective at communicating at the beginning of the project, but was VERY communicative at the end of the project when he pointed out all of the things that we did wrong. While he may have provided *us* with some helpful tips for survival in the future, it was fairly useless to him and his project because it was after the fact ... not to mention that none of us were anxious to go back to work for him.

2. Lay down the rules at the beginning of your project.

Once a bear gets a taste of bacon, it's hard to make him quit. Make sure everyone is clear about your expectations, the hard-core rules, and the case-by-case exceptions *before you begin*. For example, like most bear biologists, I expect my workers to work until the job is done, and not necessarily when the clock says 5:00 p.m. Also, I don't tolerate tardiness (if it's not nipped in the bud, it will throw off your entire schedule), and at the beginning of my projects, ev-

eryone knows they risk being left behind (or fired) if they are late. Case-by-case exceptions may be allowed if someone's dog died, or if they have Malaria, but I keep a close eye on these cases to make sure they don't become excuses or habits.

3. Try to think of every scenario. I never would have imagined that one of my grad students would walk off and leave a group of naïve Texas undergrads in the Utah desert on an unmarked 7 mile hike ... without a map. But it happened (briefly, thank goodness). So, I had to incorporate a new rule that stated "grad students will never leave undergrads unattended on hikes" or even the grad students would get a *bus ticket* home. I even tightened the rule to state that each group would be led by a grad student, and followed up by a graduate student in case any undergrads ran ahead or lagged behind. When your project starts, you may not know enough to predict potential scenarios. However, I recommend talking to different biologists or professors about their experiences. I'm sure they'll come up with unimaginable scenarios, and will entertain you as well. Remember, you're just learning the tricks of the trade, but if you can do your best to think ahead, you'll be able to stay a step ahead of your technicians or student workers.

4. Build your team. It's hard to work toward something that you don't understand. If you're building a team, then include everyone in the vision. Be sure that they are aware of their importance to the project, and that *how well* they collect data will have a dramatic impact on the outcome. Let them also enjoy the highlights of your projects, and be sure to acknowledge them in public talks or when you have special visitors.

Student Forum

5. **Teach them what they need to know.** Be sure that you take the time to teach your entire team about the skills they will need to know. Also, make sure everyone is on the same page, collects data in the same way, and uses the same techniques, etc. Before we started on the Lewis & Clark trip, we spent an entire day learning the techniques, measuring everyone's paces, and even learning about bear safety.

6. **It's not what you expect, but what you inspect.** Supervision is a skill that requires accountability, patience, and prudence. I remember all too well what I was like when I was young (a *long* time ago). First, I was too afraid to ask for help because some people made me feel stupid if I asked;

second, I had no concept about science; and third, I had very little field experience. A good supervisor will understand and relate to their workers, but also know when they need some individual instruction. It may require some intense coaching at first, but over time, you'll learn to let up a little bit, monitor their work, and fix the problem areas as they arise. They'll also learn to trust you with their weaknesses, and let you know when they are having trouble. Brian Scheick, one of our Student Forum leaders, tells me about his favorite supervisor during his earlier years. She frequently came out to see how things were going in the field, worked like a dog alongside every-

one else, and walked the walk as an example to everyone else. Be sure to be an integral part of the team, check up on your workers to learn about what they're seeing in the field or if they are having any problems, and make them feel good about what they're doing. Also, check their work (telemetry, vegetation transects) to make sure they are collecting the data the way in which you instructed them.



7. **Make the right thing easy and the wrong thing difficult.** A famous horse trainer developed this philosophy, and it's perfect for kids, dogs, bears, students, and every other critter than needs some training. I used to be a professional at pushing people's buttons to see what I could get away with, and getting away with it only lead me deeper into my delinquency. For a young undergrad, their somewhat myopic and short-term goals might be to see how fast they can drive the project 4-wheeler, pick up on the other young freshman gal that you just hired, or see how fast a bear really runs. They just think differently than most humans. Don't expect them to behave like

adults because they haven't had that much experience at it. However, if you make it *easy* for them to do stupid things, then they will continue doing it. As these problems arise, clearly state that this behavior is not acceptable and wave the *bus ticket* in front of their eyes. If they do it again, then they need to be fired. Even then, you are teaching them an important life lesson.

8. **Keep strife out at all costs.** Strife caused by one worker will demolish your entire team – look what happens on the TV show, "Survivor" ... only one person wins the money. I spend very little time contemplating on how to deal with strife ... if someone starts gossiping, backstabbing, or creating alliances, they are gone. No further discussion.

9. **Keep the drama on TV.** For my trip with the students, I limited them to 1 large duffel bag a piece. When several students showed up with body bags filled with curling irons, 4 pairs of shoes each, and stuffed animals, I made them repack and leave half of their stuff behind. It was simply too much junk. Emotional baggage can also be the same. I'm not an ogre when it comes to personal issues or the occasional melt-down on a field project. However, sometimes too much drama is an overload for everyone. Once the 3 hour midnight phone calls to boyfriends becomes a habit, or your other workers are wearied by constant head games, you need to do some re-packing. Be careful not to spend too much time on someone who really needs a therapist instead ... it could compromise your entire project. Also be careful, however, not to drag your own drama into the field station. You are being watched more than you know.

10. Follow your own rules. Your workers will be able to spot a hypocrite when they see one, and they are just waiting for the opportunity to point it out. When I set the rules for no alcohol on my trip, it had nothing to do with age. It had to do with safety, or avoiding having to go down to the town jail to bail someone out thus ruining the whole trip. If I was allowed to drink, it would set me above the law and turn the rule into some sort of punishment. That was not my intent. Be ready to compromise if you expect everyone else to do so as well.

11. Be generous with the praise, but don't be a sap. Your student workers aren't dogs, so they don't need a biscuit every time you walk into the kitchen. Reward them when they're doing a good job, but don't overdo it because then you start feeling obligated to do it, or your workers think something's wrong when you don't shower them with confetti everyday. My favorite way of dealing with my team is to have an occasional pow-wow where we evaluate the progress of the project, and I tell them how proud I am of their work overall. However, there are times when you'll want to acknowledge them when they do go beyond. For example, if you work 12 hour days, but the truck breaks down and you work 16 – let them know that extra effort was noticed, *especially if they didn't complain.*

12. Keep the fun in your project. You can show your workers that they are important by celebrating birthdays and holidays. Brian Scheick also suggests celebrating events such as the end of a good trapping season with an early field day. Let your team get some rest, or have a volleyball game or two. Your field time is limited, but be sure to enjoy the day and the people in your life at that point. You can look back on

it with fondness or regret – you choose.

I'm sure you will all do well, and will earn the respect of your workers over time. Remember, however, that it probably won't happen overnight, and it *does* have to be earned. These guidelines should be enough to get you started, and if anything, should help you develop your own guidelines. Let me hear from you if you have any experiences or new ideas that helped you during your past project. Best wishes! 🍀

Viva Mexico! IBA Students, Get Ready!

Our upcoming 18th International Conference on Bear Research & Management promises to be one of the best when it comes to student activities. We're doing everything possible to make your travel to Monterrey convenient and cost-efficient, so keep posted on the new IBA website for more information! Here are the planned activities for November:

- 1. Student forum and brainstorming session** – scheduled toward the beginning of the conference, this will be a wonderful time to meet and get to know your IBA professionals over a lunch-time meal. It is also a great opportunity to present your own or learn about other student proposals, and get helpful advice on the best methods and approaches. Announcements will be available on the website and on Truman.
- 2. Silent Auction benefiting the Student Forum** – this will be our first silent auction, and we hope it will become a tradition. Brian Scheick (Florida Fish & Wildlife Commission) will be helping us to coordinate this event, so thanks to Brian! This is how it works:

- Students and IBA professionals are asked to donate regional craft items pertaining to bears (carvings, jewelry, photos, hand-woven textiles, etc.);
- Items should be registered via email with Brian Scheick at Brian.Scheick@fwc.state.fl.us
- Items can be brought with you on your trip to Mexico, or can be shipped to the address listed on the website under "Silent Auction";
- Do NOT bring anything containing bear parts (hair, claws, etc.) because of CITES issues;
- Do NOT bring anything containing firearms or explosives (like that cute coffee table you made for your mom using shotgun shells formed into the shape of a bear head) – Mexico has very strict arms laws.
- Funds from the Silent Auction will be used for student housing costs and conference activities.

3. Our new "101" Series – we are experimenting with a series of "101" sessions for our IBA students (and other conference participants initiating bear research), and will begin with density estimation and genetics. These sessions will be taught by IBA professionals, and will be pre-cursors to more advanced topics on genetics and population monitoring.

4. Student Housing

- This year, we are providing housing assistance for IBA student members (only) at the Monterroco Hostel at <http://www.monterroco.com/> (I promise, the accommodations are nice ☺). Housing arrangements can be made through Diana Crider at d-crider@tamuk.edu. We ask that only students in need of financial assistance request this service – only 40 spaces are available.

We look forward to seeing you there! 🍀

Student Forum

Student Highlight: Sasha Carvajal Villareal

Monterrey, Nuevo Leon,
Mexico

I met Sasha Carvajal during my adventures with bears in Mexico, and she was a breath of fresh air. Sasha has been helping me tremendously with the IBA Mexico conference, and will also be presenting an oral presentation regarding her black bear research in the El Cielo Biosphere Reserve in Tamaulipas. She is a champion! She is highly respected in her field, and seems to be able to work with just about everyone in Mexico. Sasha has overcome tremendous obstacles (like many of our other IBA students) to accomplish her dreams of being a carnivore biologist in a country where this career choice is not very lucrative (we're hoping to fix that!). She received her B.S. in Biological Sciences at the Universidad Autonoma de Nuevo Leon, and her M.S. in Biological Sciences at the Instituto Tecnologico de Ciudad Victoria. She then worked for the organization



PRONATURA in Mexico for several years as the Regional Coordinator

about Sasha and bears in Mexico at the conference! 🐾

for the Eastern Sierra Madre. While there, she was responsible for monitoring populations of wild cats (ocelots, margay, jaguarundi), bats, and black bears. Sasha has now been accepted to do her Ph.D. at Texas A&M University-Kingsville studying margay in the El Cielo Reserve. I am very proud of Sasha for her integrity and perseverance, and am glad to call her friend. We wish her the best in her new goal of getting her Ph.D.! Keep an eye out – you'll be hearing a lot more

Publications

Recent Bear Publications

Richard B. Harris
Ursus Editor
218 Evans
Missoula, Montana USA 59801

Tanya Rosen
Bard Center for Environmental Policy
Bard College
Annandale-on-Hudson
New York, USA 12504

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Check Out Our New Website!

www.bearbiology.com

International Association for Bear Research & Management
IUCN Bear Specialist Group

IBA

IUCN BEAR SPECIALIST GROUP

URSUS JOURNAL



Get the latest news on conferences!

Get ready for IBA elections!

Online membership coming soon!

Student information!

General information about bear biology & management!

For more information, contact Diana Doan-Crider at d-crider@tamuk.edu or (361) 593-5043

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Events

18th International Conference on Bear Research and Management

November 4-10, 2007
Monterrey, Mexico

Important Announcements

- Online registration is now open!
- The Travel Grant deadline has passed!
- Air travel to Mexico requires a passport!
- Some countries require special visas to enter Mexico!
- ALL conference updates can be found at www.bearbiology.com!

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Summary of Important Dates

Conference Dates:

November 4-10, 2007

BSG Groups:

November 10, 2007

Abstract Submissions:

begins February 1, 2007

closes May 1, 2007

Travel Grants:

begins April 15, 2007

closes July 2, 2007

(NOTE CHANGE)

Early Registration:

begins April 15, 2007

closes October 15, 2007

Location

Monterrey, Mexico, has been chosen as the site for the 18th International Conference on Bear Research and Management, to be held November 4-10, 2007. The IBA conference will coincide with UNESCO's Universal Forum of Cultures (<http://www.monterreyforum2007.org>), which will take place September-December, 2007. Though Monterrey is Mexico's 3rd largest city, it is beautifully situated at the head of the Sierra Madre Oriental mountain chain. Monterrey is located only 2 hours south of the U.S. border, and rests in the Tamaulipan thornscrub/Chihuahuan desert at approximately 800 m above sea level. The Sierra Madre dramatically rises up to pine/oak forests at 2000 m within 1 mile of the city's edge. November was chosen for the conference because of the greater potential to see bear activity and experience pleasant weather conditions.

Several key bear areas are within a 1-hour drive of the city. Due to habitat encroachment, an increasing bear population, and possibly drought-

related bear movements, reports of bears and bear-human conflicts have been increasing. Interest in bears is high, both publicly and within management agencies. Bear research and management in Mexico is an issue that has recently received attention at both the state and federal level, but an active conservation strategy is lacking. This conference will bring attention to bear conservation at a crucial turning point, and will encourage Mexican biologists to seek training in the area of bear research and management.

Conference Program

The conference begins on Sunday evening, November 4 and ends on Saturday, November 10. Bear Specialist Groups and student workshops will meet on Saturday, November 10. Plenary sessions will focus on a variety of topics, and will be posted by July 31 on the website. Workshops include the following:

- Fundamentals of DNA sampling and estimation of population size and density, by John Boulanger and Gary White
- Monitoring bear population trends in forested environments, by John Boulanger and Mike Proctor (and other invited speakers)
- Planning and Conducting Non-invasive Genetic Research, by Kate Kendall, Jeff Stetz, and Amy McCleod
- Bear Handling 101, by Dr. Jon Arnemo (students and novice biologists)
- Bear Management in Mexico (invited only – designed to help Mexican bear managers)
- What Can be Learned from Long Term Observations of Individual Bears, by Ben Kilham and Steve Herrero

Bear Specialist Groups will also be meeting on Saturday, November 10. Contact Dave Garshelis at dave.

garshelis@dnr.state.mn.us for more information.

Registration & Travel Grants

Early registration will begin **April 15, 2007**, via online or fax (forms downloads are on the website). Late registration begins **October 16, 2007**. Early registration will be available and encouraged. Registration fees are:

- Regular: \$250 USD
(Late: \$325 USD)
- Developing Country (see list on website): \$200 USD
(Late \$225 USD)
- Students: \$100 USD
(Late \$125 USD)

Deadline for submission of travel grants has passed. Over 40 Travel Grant applications were received, and funds are limited. Applicants should be prepared to seek travel funds elsewhere in the event that requests are reduced or declined. All Travel Grants will be handled in U.S. Dollars, and delivered to recipients upon arrival to the conference. Arrangements will be made to facilitate check cashing on the conference premises.

Facilities & Transportation

Monterrey is a progressive city, and facilities are ideal for the IBA's conference needs. Monterrey has an international airport with 250 daily direct flights from Mexico City, Dallas, Houston, New York, Chicago, Memphis, Atlanta, and Los Angeles. **We have secured conference discounts for Continental and American Airlines (see website).** More information on connecting flights from Europe and South America can be viewed at <http://www.ocvmt.com/>. We will be providing services such as language translation (Spanish, Russian, Japanese, and others), field trips, assistance with immigration permits, and logistics. The host hotel for the conference is the Holiday Inn-Parque Fundidora; group rates have been secured at \$110 USD/room (single and double rates). The conference

hotel is connected to the 350-acre enclosed conference site, which also contains a large eco-park, museums, and family areas, and is conveniently located close to banks and great restaurants. Other nearby hotels have been secured at \$59/room, including continental breakfast, and are within a 15 minute walk or a 5 minute taxi ride. Less expensive hotels & hostels (\$20-45.00 USD/night) are within a 5-minute metro or taxi ride of the park. Due to the UNESCO Forum activities, **hotel arrangements should be made at your earliest convenience.** See the website for hotel information.

Special housing and transportation will be provided for students needing assistance with lodging. Corporate sponsorship is expected to cover expenses for some conference meals, field trips, and special events. We will have direct communication with the Mexican Consulate and U.S. Embassy to ensure that immigration procedures go smoothly for conference participants. Any air travel into Mexico will require a passport. U.S. citizens do not need a passport for ground travel until January 1, 2008. We recommend direct flights to

Mexico (via Mexico City) for travelers from Asia / Europe, thus avoiding U.S. immigration requirements. Travelers temporarily landing in the U.S. en route to Mexico may need to apply for a C-1 Transit Visa (see links on the website for more details).

Transportation to and from the airport will be provided. Please see the website for further details on this service.

Field Trips

Field trips will include the Chipinque National Park, the Sierra los Picachos, and Cumbres National Park (black bear study areas). Other outdoor attractions close by include Garcia Caves, Horsetail Falls, and the Mina Archeological Area. Bird-watching includes a large population of red-fronted parrots and migratory songbirds; Monarch butterflies may also be migrating along the Sierra Madre during early November. **Field trip fees are \$10 USD to cover lunch.** Please sign up for field trips on your registration form. For late sign-up of field trips, please contact Diana Crider at d-crider@tamuk.edu directly. The conference site is close to the historic

downtown area, as well as natural and scenic areas. The Coordinating Committee will assist conference participants in arranging travel for those wishing to visit other natural areas and parks of Mexico before or after the conference.

Workshops And Meetings

We have an excellent slate of workshops pertaining to genetics, density estimation, bear



© Zoo Outreach Organization

Events

management, and animal handling. Please refer to the website regarding current updates pertaining to the conference program at www.bearbiology.com.

Expo Oso!

We are hosting an exhibition of bear-related crafts and equipment for the duration of the conference. The exhibition center is 6,300 square feet, adjacent to the conference meeting rooms, and highly accessible to conference participants and visitors. Poster sessions will also be held in this room. There will be no charge for booth rental, but spaces must be reserved by **October 1, 2007**. Mexico does charge duty for the import of consumable products. Import/Export information can be found on the website. Contact Diana Crider at d-crider@tamuk.edu for more information.

Silent Auction

A **Silent Auction** benefiting the **Student Forum** will be held during the conference; funds will be used for student housing costs and conference activities. Students and IBA professionals are asked to donate regional craft items pertaining to bears (carvings, jewelry, photos, hand-woven textiles, etc.). Items should be registered via email with Brian Scheick at Brian.Scheick@fwc.state.fl.us. Items can be hand-carried to Mexico, or can be shipped to the address listed on the website under "Silent Auction". Please take note of special restriction on imports. 🌿

10th Western Black Bear Workshop

May 18 – 21, 2009

The 10th Western Black Bear Workshop will be hosted by the Nevada Department of Wildlife in the Reno/Tahoe area from May 18 – 21,

2009. The meeting will be held at the Peppermill Hotel Casino in Reno (<http://www.peppermillreno.com>). Rooms have been contracted at about 70\$/night single or double. Please feel free to send suggestions on a theme, comments on past workshops, or any other information you feel is important. Contact Carl Lackey at cdembears@aol.com or +1 775-720-6130. 🌿

BIERZS 2007, The Symposium

Bear Information Exchange for Rehabilitators, Zoos and Sanctuaries

Hosted By
Western University Of Health Sciences
August 24 – 26 2007

Presenters Include

Jill Robinson, founder of Animals Asia, coming from China to present the key note address: 'China bear rescue centre – much more than a sanctuary'

Dr. Harry V. Reynolds, President of the International Association for Bear Research and Management: 'Building partnerships among zoo professionals, educators, and wildlife biologists to achieve conservation of the world's bears'

Some Hot In-session Topics

- Successful Rehabilitation Routines
- Successful Rehabilitation and Release Strategies
- Rehabilitation Models for North American Bears
- Behavior-Based Bear Introductions, a Model
- Practical Application of Behavior-Based Bear Introductions
- Preventive Medicine, the Bear Check Up
- Restoring Choice to A Rescued Circus Polar Bear

- The Queens Zoo Andean Bear Program
- Bear Rehabilitation and Husbandry At The Moonridge Animal Park
- Enrichment and Training Programs In A Moon Bear Sanctuary Setting
- Training Bears for Veterinary Procedures
- Modifying Old Style, Grotto Bear Enclosures for Welfare Enhancement
- Enrichment and Training Planning
- Investigating Hormonal Correlates Of Seasonal Stereotypic Swimming In A Male Alaska Brown Bear
- Chronic Dermatitis, Hair Loss in A Female Spectacled Bear
- The History of Bear Enrichment

You Can Register Now

Just fill out and submit the Registration Form on the BIERZS 2007 Brochure available on: www.bearkeepers.net

You Can Make Your Hotel Reservation Now

Just contact:
Shilo Inns Suites Hotel Hilltop
3101 Temple Avenue
Pomona, CA 91766 USA
Reservations: 1 (800) 222-2244
Reception: (909) 598-7666 ext 274
Fax: (909) 598-4627
Website: http://www.shiloinns.com/California/pomona_hilltop.html

Would You Like to Make a Presentation?

Contact: Gail Hedberg,
gailh@sfzoo.org
BIERZS 2007 Agenda Coordinator

Got Questions?

Contact the co-chairs:
Dr. Jordan Schaul,
jcschaul@aim.com
Else M.B. Poulsen,
embpoulsen@hotmail.com 🌿

IBA Membership Application

Please Complete Both Sides of Form. Mail or Fax to Address Below.

Name _____

Affiliation _____

Address _____

City _____ State/Province _____

ZIP+4 or Postal Code _____ Country _____

Telephone _____ Fax _____

Email _____

New Renewal Address Change You may share my membership information with similar organizations.

MEMBERSHIP

Standard Membership US\$50.00/year, US\$45.00/year for three or more years.
Includes *International Bear News & Ursus*. # Years _____ US\$ _____

Please donate my copy of *Ursus* to a library or deserving recipient.

Institutional Membership US\$100.00/year, US\$250.00/three years. # Years _____ US\$ _____

For those who cannot afford a Standard Membership, US\$25.00/year.
Includes *International Bear News*. If needed, a free copy of *Ursus* may be requested. # Years _____ US\$ _____

Please send *Ursus*. I have no access to it, need it & cannot afford Standard Membership.
 Donation (if possible!) included to help defray costs of sending *Ursus*. US\$ _____

GIFTS & CONTRIBUTIONS

Gift Standard Membership US\$50/year, US\$45/year for three or more years.
Includes *International Bear News & Ursus*. # Years _____ US\$ _____

Gift Institutional Membership US\$100/year or US\$250/three years. # Years _____ US\$ _____

Gift Low-cost Membership US\$25/year. Includes *International Bear News*, not *Ursus*. # Years _____ US\$ _____

_____ Gift Membership for: _____

_____ IBA Please Choose a Deserving Gift Recipient.

Tax Deductible Contribution to IBA General Fund. US\$ _____

Tax Deductible Contribution to IBA Bear Conservation Fund. US\$ _____

TOTAL AMOUNT US\$ _____

Check or Money Order in US\$ payable to IBA MasterCard VISA

Cardholder Name _____

Card # _____

(government cards include customer #) _____

Signature _____ Expiration Date _____



SEND TO: Joseph Clark, IBA Secretary
USGS-SAFL, University of Tennessee
274 Ellington Hall, Knoxville TN 37996, USA
Fax: +1 865-974-3555 or Email: jclark1@utk.edu

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Date Received _____ Amount Received _____ Start Issue _____ End Issue _____ Date Entered DB _____



Please complete both sides of form! Download form at www.bearbiology.com.

IBA Member Application, page 2

Please Complete Information on Both Sides of this Form!

Please check columns in which you have expertise and/or are willing to assist / advise IBA

		1. Expertise	2. Advise/Assist IBA			1. Expertise	2. Advise/Assist IBA
Accounting				Legal			
American Black Bear **	years			Legislative Process			
Asiatic Black Bear **	years			Life History			
Andean Bear **	years			Management			
Awards *				Member Concerns *			
Bear-Human Conflict				Media Relations			
Bears in Culture				Mentoring / Training *			
Behavior				Newsletter *			
Bylaws *				Nominations *			
Brown Bear **	years			Nuisance / Damage Management			
Conferences *				Nutrition			
Conservation *				Organizational Development			
Disease				Pathology			
Economic Development *				Physiology			
Education / Outreach *				Polar Bear **	years		
Enforcement				Policy *			
Ethics *				Population Dynamics			
Evolution				Quantitative Analysis			
Field Research				Sloth Bear **	years		
Financial Management				Strategic Planning *			
Food Habits				Sun Bear **	years		
Genetics				Toxicology			
Giant Panda **	years			Travel Grants *			
GIS				Ursus Journal *			
Grant Review *				Veterinary			
IBA History / Archive				Website *			
Habitat Evaluation				Wildlife Rehabilitation			
Husbandry / Zoo				Other - Specify			

** Please indicate number of years of experience with each species

* Indicates an IBA committee

Please check all academic degrees earned: BA/BS MA/MS PhD/DVM Other (list) _____

Please list major field of study _____

Please list all countries in which you have worked with bears _____

Please list languages in which you are fluent _____

What changes/improvements would you like to see in the IBA (newsletter, *Ursus*, conferences, etc.)? _____

How can IBA better serve its membership and/or help you? _____

Check here to include your name in the IBA membership directory

Thank you for completing the survey. Please tear out and mail or fax!

IBA Publications Order Form

Ursus Journal & IBA Conference Proceedings*	Cost*	Quantity	Total
4th 1980 Montana 1977	\$30.00	_____	_____
5th 1983 Wisconsin 1980	\$30.00	_____	_____
6th 1986 Arizona 1983	\$30.00	_____	_____
7th 1987 Virginia/Yugoslavia 1986	\$35.00	_____	_____
8th 1990 British Columbia 1989	\$40.00	_____	_____
9th (1) 1994 Montana 1992	\$45.00	_____	_____
9th (2) 1997 France 1992	\$25.00	_____	_____
10th 1998 Ursus-Alaska/Sweden 1995	\$40.00	_____	_____
11th 1999 Ursus 11	\$45.00	_____	_____
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14th 2003 Ursus 14 Volumes 1 & 2	\$45.00	_____	_____
15th 2004 Ursus 15 Volumes 1 & 2	\$45.00	_____	_____
16th 2005 Ursus 16	\$45.00	_____	_____
17th 2006 Ursus 17 inc. Std. Membership	\$45.00	_____	_____

*40% discount for 3 or more volumes, except Ursus 13, 14, 15, 16, & 17 Less 40% discount (-\$ _____)

Eastern Black Bear Workshop Proceedings, USA

10th 1991 Arkansas 1990	\$15.00	_____	_____
11th 1992 New Hampshire 1992	\$15.00	_____	_____
13th 1996 Vermont 1996	\$15.00	_____	_____
14th 1997 Mississippi 1997	\$15.00	_____	_____
15th 2002 Massachusetts 1999	\$15.00	_____	_____
16th 2001 South Carolina 2001	\$15.00	_____	_____
17th 2005 New Jersey 2003	\$15.00	_____	_____

Western Black Bear Workshop Proceedings, USA

4th 1993 California 1991	\$15.00	_____	_____
5th 1995 Utah 1995	\$15.00	_____	_____
6th 2003 Washington 1997	\$15.00	_____	_____
8th 2005 Montana 2003	\$15.00	_____	_____

Safety in Bear Country Videos

<i>Staying Safe in Bear Country</i> with Public Performance Rights	\$69.00	_____	_____
<i>Staying Safe in Bear Country & Working in Bear Country</i> with Public Performance Rights	\$129.00	_____	_____

Monographs of the IBA

A Proposed Delineation of Critical Grizzly Bear Habitat in the Yellowstone Region

by F. Craighead (#1, 1977) \$10.00 _____

The Status and Conservation of the Bears of the World

by C. Servheen (#2, 1989) \$10.00 _____

Density-Dependent Population Regulation of Black, Brown and Polar Bears

edited by M. Taylor (#3, 1994) \$10.00 _____

Population Viability for Grizzly Bears: A Critical Review

by M. Boyce, B. Blanchard, R. Knight, C. Servheen (#4, 2001) \$10.00 _____

US\$ Check or Money Order - Make Payable to: IBA

TOTAL US\$ _____



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University of Tennessee, Knoxville TN 37996, USA, Fax: +1 865-974-3555

Please allow 4 to 6 weeks for delivery

Please fill out form legibly!

Form also available at www.bearbiology.com.

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Fourth International Conference on Bear Research and Management
Monograph Series No. 3

Density-Dependent Population Regulation of Black, Brown, and Polar Bears

Edited by Michael Taylor

with contributions from
David L. Garshelis on Wood Bears
Shane McCarthy on Brown Bears
Andrew Derouber and Michael Taylor on Polar Bears

An invited paper presented at the Ninth
International Conference on Bear Research and Management

WHEELING, MONTANA, USA
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Front row: Harry, Piero, Karen, Joseph, Frank, Andrew, Isaac, Đuro, Ole, Michael
Back row: Koji, Diana, Matt, Richard
Headed for the door: John

⑦ term expires 2007

⑧ term expires 2008



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

The International Association for Bear Research and Management (IBA) is a non-profit tax-exempt organization (USA tax #94-3102570) open to professional biologists, wildlife managers, and others dedicated to the conservation of all bear species. The organization has over 550 members from over 50 countries. It supports the scientific management of bears through research and distribution of information. The IBA sponsors international conferences on all aspects of bear biology, ecology, and management. The proceedings are published as peer-reviewed scientific papers in the journal *Ursus*.

IBA Mission Statement

Goal: The goal of the International Association for Bear Research and Management (IBA) is to promote the conservation and restoration of the world's bears through science-based research, management, and education.

Objectives: In support of this goal, IBA's objectives are to:

1. Promote and foster well-designed research of the highest professional standards.
2. Develop and promote sound stewardship of the world's bears through scientifically based population and habitat management.
3. Publish and distribute, through its conferences and publications, peer-reviewed scientific and technical information of high quality addressing broad issues of ecology, conservation, and management.
4. Encourage communication and collaboration across scientific disciplines and among bear researchers and managers through conferences, workshops, and newsletters.
5. Increase public awareness and understanding of bear ecology, conservation, and management by encouraging the translation of technical information into popular literature and other media, as well as through other educational forums.
6. Encourage the professional growth and development of our members.
7. Provide professional counsel and advice on issues of natural resource policy related to bear management and conservation.
8. Maintain the highest standards of professional ethics and scientific integrity.
9. Encourage full international participation in the IBA through the siting of conferences, active recruitment of international members and officers, and through financial support for international research, travel to meetings, memberships, and journal subscriptions.
10. Through its integrated relationship with the Bear Specialist Group of the World Conservation Union (IUCN)/Species Survival Commission, identify priorities in bear research and management and recruit project proposals to the IBA Grants Program that address these priorities.
11. Build an endowment and a future funding base to provide ongoing support for IBA core functions and for the IBA Grants Program.
12. Support innovative solutions to bear conservation dilemmas that involve local communities as well as national or regional governments and, to the extent possible, address their needs without compromising bear conservation, recognizing that conservation is most successful where human communities are stable and can see the benefits of conservation efforts.
13. Form partnerships with other institutions to achieve conservation goals, where partnerships could provide additional funding, knowledge of geographical areas, or expertise in scientific or non-scientific sectors.

Deadline for the November 2007 issue is October 5, 2007

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