Two male yearling American black bears captured together and collared along with their mother in late April, 2014. Read more on urban black bears in North Carolina on page 22.
# Table of Contents

**INTERNATIONAL BEAR NEWS**

3 International Bear News, ISSN #1064-1564

**IBA PRESIDENT/IUCN BSG CO-CHAIRS**

4 President’s Column

6 Can Tigers Help Save Bears?

**IBA MEMBER NEWS**

8 Frederick Chamberlain Dean 1927 - 2014

**IBA MEMBERSHIP NEWS**

10 Membership Expiration Notification

**BEAR CONSERVATION FUND**

10 Bear Conservation Fund News

**CONSERVATION**

11 Bear Specialist Group Member Receives Award for Sloth Bear Conservation in India

12 BSG Red-listing and Other Conservation Activities Reported in Greece

**ILLEGAL TRADE**

14 Strengthening our Knowledge on Bear Trade Through Collaboration Between TRAFFIC and the BSG

16 Understanding Attitudes Towards Bear Products in Cambodia and Lao PDR

**HUMAN BEAR CONFLICTS**

18 Country-wide Range Mapping of Asiatic Black Bears Reveals Increasing Range in Japan

**BIOLOGICAL RESEARCH**

20 Adding stones to the puzzle: Approaches to the Alopecia Syndrome in Captive Andean Bears (Tremarctos ornatus)

22 Movements, Population Ecology, and Harvest Vulnerability of Black Bears in Urban/Suburban Habitats within the Asheville Watershed

24 Making Scat Count: Citizens Help Inventory Grizzly Bear Populations in Alberta, Canada

25 Artificial Den Creation in Coastal British Columbia, Canada

26 Unity College Bear Study: A Student Perspective

**MANAGEMENT CORNER**

28 A New Black Bear Density Estimate for New Mexico?

28 The Maine Bear Referendum

29 Brain Lesions a Mystery in Nevada

30 Park County, Wyoming Carcass Management Program

**WORKSHOP ANNOUNCEMENTS**

31 22nd Eastern Black Bear Workshop

31 12th Western Black Bear Workshop

**FORUMS**

32 Student Forum

**PUBLICATIONS**

30 Recent Bear Literature

**IBA OFFICERS & COUNCIL**

38 Executive Council Members and Ex-Officio Members

**BSG COORDINATING COMMITTEE**

39 BSG Expert Team Chairs
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 regional correspondents by email are preferred; otherwise, mail or fax to the address above. IBA reserves the right to accept, reject, and edit submissions.

Regional Correspondents:
- Alaska: Steven Kovach, Email: steve_kovach@fws.gov
- Western US and Canada: Carrie Lowe, Email: lowecarrie.cl@gmail.com
- Eastern US and Canada: Jared Laufenberg, Email:jlaufenb@utk.edu
- Central and South America: Marco Enciso, Email:marco.enciso@gmail.com
- Europe and Central Asia: Tatjana Rosen Michel, Email:trosen@panthera.org
- Zoo and Captive Bear Organizations: Jordan Schaul, Email:jordan.schaul@gmail.com
- Bear Specialist Group: Dave Garshelis, Email:dave.garshelis@state.mn.us
- All other submission and/or inquiries: Mark Edwards, Email: mark.edwards@gov.ab.ca

Deadline for the Spring 2015 issue is 5 February 2015.

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

For Membership Information and Publication Ordering
Go to www.bearbiology.com to order or renew memberships, make donations, and/or update member information.

The use of the IBA logo at the end of an article indicates articles submitted via the IBA regional correspondents and the IBN editorial staff.

The use of the BSG logo at the end of an article indicates articles submitted via the Bear Specialist Group.
IBA President

President’s Column

Karen Noyce
15542 D County Road 72
Warba, MN 55793 USA
Email: karen.v.noyce@gmail.com

23rd International Bear Conference, Thessaloniki, Greece

The 2014 IBA Conference is now behind us, and what an event it was! As I write, some people are still arriving home from extended travels following the conference. The meeting was full and lively, with attendance topping 270 and papers spanning a wide range of topics. Abstracts of oral papers and posters can be viewed on the IBA website (www.bearbiology.com); just click on the IBA dropdown menu on the home page, then on “Conferences and Workshops”, look under “Past conferences and workshops”, and you will see a place to click for Abstracts of the 23rd Conference. Special workshops dealt with conservation options for the remnant population of Mongolian Gobi bears, bear-human conflict, and a session presented by the IUCN Bear Specialist Group on progress in updating Red-List assessments of the world’s bear species (see the BSG column in this newsletter).

There was good regional participation of biologists from the Balkans, where 9 countries, including Greece, share the Dinaris-Pindos population of brown bears, each with its own brand of bear management. Due to the close timing of the conference with this newsletter deadline, session summaries will not appear until the spring issue of IBN, but I will report on several conference events below.

We owe enormous thanks to Alexandros Karamanlidis, Vicky Papadimitriou, and their teams from Arcturos and Symvoli for their monumental efforts in organizing and hosting this successful conference. Thanks, too, to the gracious welcome from the mayor of Thessaloniki (who also happens to be the founder of Arcturos), the Greek Ministry of Natural Resources, and our other Greek colleagues at the University of Thessaloniki and Kallisto, for welcoming us to Greece and showing us their city.

President’s Award

One of the delights of being IBA President is the opportunity to recognize a colleague for contributions to bear conservation with the IBA President’s Award. There are no written rules for bestowing this award and no panel to choose the recipient. Mike Pelton, who initiated this award, simply decided that the president could take the opportunity to single someone out for recognition that he or she felt was deserving. Past recipients have included, variously, those on the front lines of IBA, those working behind the scenes, and those making outstanding professional contributions, but all, through their work as active IBA members, making significant contributions to bear conservation.

I am pleased this year to present this year’s President’s Award to Dr. Lydia Kolter, Curator of Mammals and Supervisor of Research at the Cologne Zoo, and an affiliate of the University of Cologne, Germany. I announced the award during closing remarks at the conference in Thessaloniki. Those who have attended IBA Conferences in the past will recognize Dr. Kolter as a quiet and steady presence in the IBA and the international bear community for over 2 decades. Her work in the fields of ex-situ wildlife research and the integration of zoo work with in-situ conservation are highly regarded and her passion for the work is undeniable. Work with bears in captive facilities has tended to occupy a minor position in the constellation of fields that anchor IBA conferences. But through Dr. Kolter’s reliable presence at IBA meetings and readiness to pose insightful questions and provide broader perspective to our field, she has been a steady force towards greater integration of in-situ and ex-situ conservation.

Lydia has held her positions at the Cologne Zoo since 1984. She also coordinates several studbooks, including those for the Andean bear, sun bear, and Pshevalski horses. She is a long-standing member of the Bear Taxon Advisory Committee (BearTAG) for the European Association of Zoos and Aquaria (EAZA) and she is co-chair of the Captive Bear Expert Team of the IUCN Bear Specialist Group. Lydia has mentored many people over the years with dedication and high expectations. As one former student said, “She is the pressure that turns carbon to diamonds”.

International Bear News  Fall 2014, vol. 23 no. 3
Distinguished Service Award

To our great sorrow, shortly before the final production of this newsletter, we learned of the passing of Fred Dean, chair of the Research and Conservation Grants Committee for 14 years. After falling gravely ill in early October and resigning as committee chair, Fred took great pains to assure smooth transitioning to a new chair. Shortly before he died, IBA Council made our gratitude known for his years of exceptional service by awarding him the third ever IBA Distinguished Service Award. According to Sue, Fred’s wife, Fred was very touched by the award. During my years as BCF chair, I spent many hours on the phone with Fred discussing funding and the grants program and we came to be good friends. I will miss him. A full obituary appears on page 8.

Council Business:

IBA Council held a full-day meeting on Sunday, October 5, in Thessaloniki, immediately prior to the start of the 23rd IBA Conference. All officers and regular Council members were in attendance. The agenda was full. Among the most significant things to report from the meeting are the following.

- IBA finances are in good shape, following a period of leaner years during the world economic downturn. Ursus is essentially self-supporting at this time, and revenues from our membership in BioOne and JSTOR continue to increase every year. IBA membership holds steady at 500 – 600 members.
- Council approved sending a letter to the Mongolian government outlining arguments against a proposal to remove bears from the highly endangered Gobi bear population for purposes of captive breeding and subsequent population enhancement. Later in the week, Council members also met with the Mongolian Ministry of Natural Resources and Green Development, at his request, at which time the Minister asked for IBA’s assistance in the coming year in establishing plans and mechanisms for conserving the Gobi population. We will be exploring this further.
- Council had a long discussion regarding future directions for the IBA Website. Upgrading the website has become a necessity, as current software will become obsolete and unsupported by our web company. Moreover, Council increasingly recognizes that enhanced capabilities on the website, including discussion forums, web-based membership management, and eventually streaming capabilities, will both increase the efficiency of our operations and greatly add to the services we can offer members. The estimated cost of upgrading with our current company, however, is a real stumbling block, estimated at $25-35,000. This price is similar to what other organizations we have checked with have paid, but we will look further for other quotes. A key consideration is that our current company maintains excellent security, which is critical for IBA, as we handle credit card transactions on our website. Another website concern is the concentrated workload that our webmaster, Diana Doan-Crider, shoulders. We must look for ways to spread this work.
- Hand-in-hand with discussions of future website plans, Council has recognized the need to step back and clearly review, revisit, and rearticulate our goals and objectives as an organization, in order to assure that we do not waste money and time going down paths that do not advance our priorities. We discussed the need to outline an operational and financial plan for achieving our goals. An ad-hoc sub-committee of Council consisting of Gordon Stenhouse, Andreas Zedrosser, Emre Can, Tabitha Graves, and Karen Noyce met during the conference week to initiate a strategic planning process.
- Another Council discussion centered on Conference Travel Grants. The months leading up to the Thessaloniki Conference highlighted some of the dilemmas conference organizers face in awarding travel grants, as well as misunderstandings on the part of applicants about the availability and allotment of funds. In short, money for travel grants does not typically come from IBA, but rather is raised by conference organizers. This is a huge burden for organizers, especially in some countries. Importantly, funds always fall far short of requests and IBA policy has been to provide assistance to a mix of students and professionals from a range of countries, and to avoid supporting the same people for multiple and successive conferences. This is a message that we have not always made clear. I will revisit this topic in IBN in the future.

A Message to Members

On a final note, conferences always bring a lot of talent and energy together. The expertise that I see among IBA members (and I have to say it – especially the younger members), not just in science, statistics, modelling, and on-the-ground conservation, but also in electronic communications, e-publishing, web-based applications, and use of social media, is astounding. There is nothing that I would like more than to engage a host of members in keeping IBA abreast in the electronic age. We cannot effectively use the tools now available to organizations like ours without more people on board who know how to use them and can help us institute and oversee use of new technologies. I don’t know how to search out the individuals most capable and interested in doing this, so please, make yourselves known, with your ideas and willingness to take on a project.
Can Tigers Help Save Bears?

Rob Steinmetz  
IUCN Bear Specialist Group Co-Chair  
World Wildlife Fund – Thailand  
Bangkok, Thailand  
Email: robtyn@hotmail.com

Dave Garshelis  
IUCN Bear Specialist Group Co-Chair  
Minnesota Department of Natural Resources  
Grand Rapids, MN 55744, USA  
Email: dave.garshelis@state.mn.us

Tigers are a global icon of endangered species and overlap geographically with parts or most of the ranges of 4 species of bears (sloth, sun, Asiatic black, and brown bear) in 13 countries. From India northeastward to Russia, and from Nepal south to Indonesia, tigers and bears share much of the remaining forests of Asia.

Tigers are more severely threatened than any of the co-occurring bear species: just 3,500 wild tigers remain across the entire 13-country range of the species. Tigers have been completely eradicated from Cambodia and Vietnam, and down to just tens of animals in several other countries. In contrast, bears still occur widely in those same countries, wherever suitable habitat remains. These differences in status are mainly because tigers and their ungulate prey have been intensely targeted to feed the massive commercial trade in wildlife that permeates Asia. Bears are poached too, but nonetheless fare better than tigers because the food that bears rely on (mainly fruits and insects) have been less affected than the ungulate prey necessary to sustain tigers. Asian forests often look empty to a hungry tiger, but bears, known for their broad and adaptable diet, can generally find enough food.

Tigers receive much more conservation attention than bears, reflecting their desperate status, and charismatic appeal to many people. For example, India recently enacted a national bear conservation action plan in 2012, officially endorsed at the highest level; this plan is a major achievement shared by few countries in Asia (the only other is Taiwan). But tigers in India have had a 40 year head-start. India’s national level efforts to save its tigers started in 1973, as Project Tiger. Thailand enacted a national tiger conservation plan in 2004, but, like most countries in the region, places little emphasis on bear conservation. Since 2008 all 13 range countries have united to save tigers from extinction, under the Global Tiger Initiative, an alliance of governments, international agencies, and NGOs (non-governmental organizations). Their goal is to double global tiger numbers by 2022. Can all the conservation attention heaped on tigers also benefit bears, given their geographic overlap?

What might tiger conservation offer bears? The list of site-based interventions associated with tiger conservation initiatives is long: management support, training and equipment for park guards, long-term funding, patrolling systems, community engagement, anti-poaching campaigns, and scientific monitoring. Thus, places receiving increased support due to their tigers are also potentially much better managed and protected. Furthermore, and very importantly, tiger conservation initiatives tend to apply long-term financial and institutional commitments, and are sometimes implemented at a landscape-scale.

These conservation efforts are paying off for tigers. For example, the tiger population in Nepal (which overlaps both sloth bears and Asiatic black bears) has increased by 63% since 2009 (to 198), and in the past 2 years there has been no known poaching of tigers or rhinos. The tiger population in Russia (which overlaps brown bears and Asiatic black bears) has rebounded from near-extinction in the 1960s, with population growth averaging 6% per year and driving a recent expansion into previous range in China.

It is reasonable to expect that these successes should trickle down to bears and other species. However the evidence...
for this is actually slim because bear populations are not usually monitored. Bears are also more difficult to monitor than tigers. Unlike bears, tigers predictably use forest trails where they are easily camera-trapped, and they possess unique, bold, stripe patterns that make them easy to individually identify and thus count.

Sometimes though, the intensive camera trap monitoring of tigers yields ‘by-catch’ information about the status of bears. In Kuiburi National Park in Thailand, tiger and tiger prey recovery efforts over 6 years led to a 4-fold reduction in overall poaching pressure and an increase in ungulate abundance (Steinmetz et al. 2014). Notably, photo encounter rates with sun bears and black bears more than doubled as poaching pressure declined, suggesting bear populations benefited from this tiger project’s conservation activities.

However, there is a major mismatch in the fine scale distribution of bears and tigers in most countries, which limits the extent to which bears can be beneficiaries of tiger conservation. Tigers have been extirpated from many forests that are still inhabited by bears. For example, in Thailand, tigers remain in <5% of protected areas, but sun bears and black bears still occupy >70% of these sites. Not surprisingly, most attention goes to the 5% with tigers, which means that most of the bear range receives nominal support (for routine protected area management) but does not benefit from the enhanced support that comes with dedicated tiger conservation.

In India (home to 50% of the world’s tigers), tigers occupy 17 states; bears occupy these and 9 others. Enhanced efforts to protect tigers and their prey yielded a remarkable 20% increase in tigers (from 1,400 to 1,700) in just 4 years (Jhala et al. 2011). Meanwhile, sloth bears and Asiatic black bears, which were monitored as part of this program but much less precisely, seem to have declined in as many states as they increased (Jhala et al. 2011). Moreover, while protected areas received enormous attention, the areas outside the protected areas, where many bears live, apparently degraded even further. It appears that tigers, the ultimate umbrella species, have helped to save bears, but the shield offered by this umbrella is far from complete.

We must recognize that conservation funds are inevitably limited and bears in Asia will never attain the star status of tigers. We think we can do more, though, to derive greater conservation benefits for bears from the extraordinary efforts directed at tigers. We should be working more closely with the “tiger people” to generate more interest in bears. After all, bears are pretty darn charismatic as well. Tigers have their stripes, but they can’t stand on 2 legs!

Literature Cited

IBA Member News

FREDERICK CHAMBERLAIN DEAN 1927 - 2014
Frederick Chamberlain Dean died Friday, November 28, 2014 at his home where he had been ill for a little over two months. Fred was born in Brookline, Massachusetts, May 22, 1927 to Harold Frederick Dean and Margaret Hannum Dean. He graduated from Putney School in 1945, served a year in the U.S. Navy followed by six years at the University of Maine, Orono, receiving a B.S. in 1950 and an M.S. in 1952. He received his PhD in Forest Zoology in 1957 from the State University of New York, College of Forestry, Syracuse. Fred’s early interest in the natural world was nurtured by his summers as a camper and counselor at Camp Treetops in the Adirondacks. Fred met his wife, Sue McEldowney, of Newell, West Virginia, when they were students at the University of Michigan Biological Station in 1949. They married in July, 1950 in Hastings, Ontario where Sue’s parents had a summer home. Their first son, Douglas Malcolm, was born in 1954 in time for their move to Alaska the same year.

Fred taught Wildlife Management and was Head of the Department of Biology and Wildlife at University of Alaska Fairbanks from 1954 to 1973, becoming a full professor in 1966. He was Program Leader of the Cooperative Park Studies Unit from 1972 to 1983, and Adjunct Professor of Wildlife Management from 1983 to 1990. He was made Professor Emeritus of Wildlife Management in 2001. Fred was major advisor for 30 graduate students and served on the committees for over 40 more. He was editor of the Biological Papers of the University of Alaska from 1955 through 1974 and a member of the editorial board for several years after that. He was Assistant Leader of the Alaska Cooperative Wildlife Research Unit from 1954 to 1973.

Fred’s research was wide and varied, from a biological survey of the Baird and Schwatka Mountains in 1963 to Glacier Bay Humpback Whales in Cooperative Park Studies work in the 70s and 80s, but his chief research focus was on the grizzly bears of Denali National Park where he worked many summers from the East Fork Research cabin with graduate students, starting in 1957.

Fred was a founding member of the Alaska Conservation Society and served as president more than once.

Fred received many honors: membership in Phi Kappa Phi (1949), The Society of the Sigma Xi (1952), Alaska Sportsmen’s Council/National Wildlife Federation Water Conservation Award (1965), University of Maine, Orono Distinguished Alumnus in Wildlife Conservation (1994), the President’s Award from the International Association for Bear Research and Management (IBA: 2010), and, most recently, the Distinguished Service Award from the IBA (2014). The Distinguished Service Award is given very rarely: Fred is only the third person to have received it since the IBA was founded in 1977.

Fred enjoyed sabbatical leaves with his family in Tennessee in 1968–69 and in Scandinavia with Sue in 1987. He was a loving husband, father and grandfather to his three sons, Douglas Malcolm, Jeffrey Hannum and Stephen Hastings and his three grandchildren, Tehben, Jebbarri and M’fanwy, enthusiastically cheering their artistic pursuits.

The family would like to express its gratitude for the excellent care given to Fred by Dr. Beth Laughlin and staff of the Holistic Medical Clinic, Heini Maisala McDonnell, the staff at the Fairbanks Memorial Hospital, the Emergency Room and by the Hospice team that gave such loving care at home. The tender support of their community of friends is most deeply appreciated. Fred was predeceased by his father, Harold, his mother, Margaret, his brother, Robert, his brother-in-law, Roderick, and his son, Douglas. He is survived by his wife, Sue, his son, Jeffrey and daughter-in-law, Ranja, his son Stephen, is sister-in-law, Ann King, his brother-in-law, Tom McEldowney; nieces Amy Ball (Jim), and Kristi Brown; nephews, Eric King, (Alison), Tim King, (Amy), and Roderick King, (Jill) and their children; cousin-in-law Gretchen Miller, as well as numerous other cousins.

After retirement Fred worked hard as the founding president of the Board of the Alaska Boreal Forest Council (1996 to 2006), bringing his credibility and integrity as a scientist to that organization. For the past 14 years, Fred has been Chair of the Bear Research and Conservation Grants Committee of the International Bear Association (IBA). He so ably devised an organized, transparent and fair system for distributing these funds that IBA credits him for advances in bear conservation around the world that would not otherwise have been possible. He was a recognized guiding force accomplishing these goals.

Julia Bevins can accept memorial donations for the charity for which Fred worked so diligently, the Bear Conservation Fund, at 3303 Checkmate Drive, Anchorage, AK 99508 or online at www.bearbiology.com/index.php?id=bcfgive and identified as the Frederick Dean Memorial Fund.

A Memorial Gathering will be held on Saturday, December 13 at 2 PM at the Unitarian/Universalist Fellowship of Fairbanks, 4448 Pikes Landing Road.
IBA Membership News

Membership Expiration Notification

Jennapher Teunissen van Manen
Secretary, International Association for Bear Research and Management
Email: jennapher.teunissenvanmanen@outlook.com

After completing the switch to an all electronic newsletter we had to work through some logistics of notifying members of their expiring membership. There are now two ways you will be notified when your MEMBERSHIP EXPIRES.

1- With each IBN issue (3 per year), we send out EMAIL NOTIFICATION to members that have expired memberships and memberships that will expire with the current issue. Please pay attention to emails from IBA that are sent at the same time as the eBlast for each newsletter.

2- On the MAILING LABEL OF Ursus (2 per year), we now show when your membership expires, so do not throw the plastic wrapper away without checking out the mailing label. Above your name appears the following: Membership Expires YEAR End IBN Issue #

The “membership expires” is the year your membership will expire and the “End IBN Issue” is the newsletter issue number that your membership expires with (not the Ursus issue). The End IBN Issue may not coincide with the month of your registration; it is simply the last issue of the year your membership expires that you would receive.

Bear Conservation Fund

Julia Bevins
Bear Conservation Fund
Email: BCF@bearbiology.com

Dear IBA Constituents,

I’m so happy to report that we have a European member for our Bear Conservation Fund (BCF) Committee, Iris Mazurek. Iris, originally a zoologist specializing in captive brown bear stereotypy, lives in London and brings to our committee a broad scope of expertise and experience. She worked for 7 years with the WSPA in international project management for the protection and conservation of bears. Currently she works with an American technology start up company managing relationships with large clients and in her spare time, engages in ad-hoc fundraising opportunities for bears and serves as an expert on the human-bear conflict team of the BSG.

I look forward to many years of fun and cooperative engagement across continents so that we can do more as a charity.

I have one more bit of fun to report. My original home is in Australia. When I was last there visiting my mother, I looked up a local potter, Lucy Vanstone, who uses a fine white clay called “Tasmanian porcelain” on which colorful images can be placed. I asked her if she would produce a series of “bears of the world” mugs for use in fundraising for the BCF. She said she would love to do that and in addition, she would distribute our rack card and save a portion of the proceeds from the local sales of these mugs for the BCF. Hurray for Lucy! I’ll be bringing one of these mugs to the student auction at every conference, so be on the lookout.
In early December we’ll be sending out an e-blast asking for donations from IBA members. You, the bear biologists, are the best advocates we have for the BCF. Please consider what you can do to promote bear conservation. I’m happy to send to you our impressive new rack cards or support you in any way that you think would be helpful.

It was my joy to see many of you in Thessaloniki. Thank you Alex and Greek associates for an outstanding meeting. The treasures of Greece were incredible and the hospitality spot on.

Bear Specialist Group Member Receives Award for Sloth Bear Conservation in India

Prakash Chandra Mardaraj
Wildlife Institute of India
Human Bear Conflict and Sloth Bear Expert Teams, Bear Specialist Group
Email: pmardaraj@gmail.com

The Government of the State of Odisha in India has bestowed the prestigious “Biju Patnaik Wildlife Conservation Award” for Balasore District (sub divisional level) in 2014 to Prakash Mardaraj. Prakash is a member of the Sloth Bear, and Human Bear Conflict Expert Teams in the Bear Specialist Group. The award was given to recognize his contribution to the conservation of sloth bears, which has included encouraging local people to preserve bear habitat in the Nilgiri Range (Mardaraj 2014). He is the second youngest person to receive this award.

Prakash was instrumental in raising the issue of sloth bear habitat destruction to the notice of the forest department. This habitat destruction is the root cause behind the human-sloth bear conflicts that occur in the Nilgiri range (Mardaraj and Dutta, 2011). Recently, with the support of the Rufford Foundation, Prakash initiated a project to conserve the highly problematic population of sloth bears in Nilgiri Range through participatory awareness programmes with local people. The goal is long-term conservation of sloth bears and their natural habitat through building coexistence of humans and sloth bears in this human dominated landscape.

Literature Cited


Basant Mohanty
(left) Prakash Mardaraj receiving the Biju Patnaik Wildlife Conservation Award 2014 for Balasore district from the District Administrator.
(right) Prime sloth bear habitat in the Nilgiri Wildlife Range, India.
BSG Red-listing and Other Conservation Activities Reported in Greece

The Bear Specialist Group held a session at the IBA conference in Thessaloniki, Greece, that included 13 presentations about bear conservation. The session mainly focused on red listing. All mammals are currently being reassessed for red listing status in 2015 so the BSG has been actively involved in gathering and evaluating data to assess the status of the 7 terrestrial bears.

Dave Garshelis opened the session with a presentation about the importance of red-listing, stressing that the list is currently the best means available for assessing which species are at highest risk, trends in species’ status and risks, and highlighting where conservation is working and where more conservation action is needed (see IUCN video: http://www.iucn.org/about/work/programmes/species/our_work/the_iucn_red_list/). This is the 50th anniversary of the Red List (previously called the Red Data Book), and members of the audience were asked to guess which 3 bear species were on that original (1964) list; a prize was offered to anyone who could name these 3 species (nobody got all 3 correct: they were giant panda, polar bear, and spectacled (now Andean) bear).

Lorraine Scotson made a short presentation on the new TRAFFIC–BSG initiative to work collaboratively to enhance a database on the trade in bear parts. TRAFFIC recently released a report of seizure data on bear parts, which highlights areas of concern, but also shows the need for better data to help combat the marketing of bear parts (see related article by Scotson, page 14).

Bruce McLellan discussed the Red List categories used by the IUCN, and explained the specific criteria whereby species could be classified as threatened (defined as Vulnerable, Endangered, or Critically Endangered). Bears have been listed under Criterion C (small population size and continuing decline) or Criterion A (population reduction in past, present, or future [30-year windows = 3 bear generations]). Bruce stressed that the current red listing requires far more supportive documentation (e.g., evidence of rate of decline) than employed in the past.

Bruce then introduced the topic of red listing at the population (instead of species) level, using brown bears as a first case study. Whereas Ursus arctos is globally a Least Concern (i.e., non-threatened) species, many small populations are isolated and threatened (isolation being defined as <1 female immigrant per 10-year generation). Bruce worked with 25 collaborators to identify 7 threatened North American populations (3 being Critically Endangered [CR]) and 13 threatened Asian populations (5 CR).

Djuro Huber continued this theme for brown bears of Europe. Europe has 10 recognized brown bear populations, ranging in size from 7500 bears (Carpathian) to 25 bears (Pyrenean). Nearly all are either stable or increasing. However, 6 met the criteria for threatened (4 very small populations are CR). Increasing infrastructure, disturbance by people, and low tolerance by people were judged to be the primary threats.

Dave Garshelis presented next on the conservation success of American black bears. This Least Concern species, the most abundant of all bears, is increasing in abundance and geographic range. Six US states where this species had been extirpated are now considered range states, and 5 states have initiated hunting seasons since the early 2000s. Safeguards entailed with agency management, mainly related to legal hunting, have contributed largely to the success of this species.

Dave contrasted this with the declining state of Asiatic black bears. Of 18 range countries, 13 report declining populations, mainly due to logging and commercial trade in bear parts. Rangewide the species is estimated to have declined 31% in the past 30 years, based on an opinion poll of the Asiatic Black Bear Expert Team; this meets the criteria (30% decline in 3 generations) for Vulnerable (VU). Although no formal population-level assessments were done for this species, Dave identified a number of very small (<100 bears), isolated populations in South Korea, Japan, Taiwan, and Iran.

Gabriella Fredriksson conducted a similar opinion poll of the Sun Bear Expert Team. This species was deemed to be in more trouble than Asiatic black bears. It is declining in 8 of 9 range countries (unknown in Brunei), and has recently...
been discovered to be extirpated or near-extirpated in China and Bangladesh. Estimated rate of decline for 30-year time windows in past, present and future all well exceed the 30% threshold for VU. Fragmentation of habitat, logging/habitat conversion, and commercial trade in bear parts are considered the primary threats.

Lorraine Scotson followed with a more rigorous investigation of the rate of decline of sun bears due to forest loss. Lorraine obtained nearly 2,000 sun bear presence points (from various surveys in mainland SE Asia and Sumatra and Borneo), and overlaid these on a GIS layer of tree cover from satellite imagery. She found that sun bears tend to select areas with >80% tree cover. Looking at the rate of decline in high-density tree cover (and commensurate increase in low tree cover) provided an estimate of sun bear decline; this exceeded the 30% VU threshold even absent effects of habitat fragmentation and poaching. Further refinements to this analysis are ongoing.

Nishith Dharaiya compared expert opinion-based assessments of sloth bears with recent information on occupied range from the 2012 India bear action plan. Whereas the Sloth Bear Expert Team estimated a rate of decline of 48% for the present 30-year window (hence nearly meeting the 50% criteria for Endangered [EN]), the action plan painted a much more optimistic picture for this species. However, Nishith showed that the action plan may have over-estimated the amount of occupied range. Given the dramatically increasing human population in India, it seems very likely that this species is in decline, although the rate of decline is still very uncertain. More work is being done to gather information related to population change.

Ximena Velez-Liendo and colleagues investigated a number of ways of assessing the status of Andean bears relative to the red listing criteria: opinions of the Andean Bear Expert Team; estimated levels of exploitation by people; extent of habitat loss based on tree cover data from satellite imagery; projected changes in habitat quality due to climate change, and analysis of sizes of habitat patches. Ximena’s feeling was that the habitat patch analysis offered the clearest avenue for assessing future population change, since much of the range (especially in the north) is extremely fragmented, and many remaining habitat patches are not thought to be large enough to sustain Andean bears in the long-term. This analysis is as yet ongoing.

Dave Garshelis summarized the status of giant pandas, the only species of bear ever listed as EN. In the previous (2007) assessment, it met the EN criteria based on a small (<2500 mature adults in total, and ≤ 250 mature adults in the largest subpopulation), declining population. The species still seems to meet the small population size criteria (although results from the latest national survey are not yet available), but some recent evidence suggests they may no longer be declining. However, a number of climate change models predict declines in bamboo that are likely to cause panda populations to decline in the future.

The session culminated with a series of short presentations by the Captive Bears Expert Team under the heading “Captive Bears for Conservation”. Lydia Kolter, Matt Hunt, Nicola Field, José Kok, Diana Zlatanova, Scott Silver, and Megan Owen provided glimpses of what zoos and other captive facilities have done to contribute to or facilitate bear conservation. Activities include educational (raising awareness), motivational (inspiring people to get involved in conservation); financial (raising funds to support conservation), training (e.g., capacity building for local vets; providing advice to local people on how to live with bears and profit with ecotourism); housing orphaned and nuisance animals; and direct research. Some examples of direct research include opportunities to test various field methods in a controlled setting, and measuring aspects of bear biology that would be impractical in the field.
Illegal Trade

Strengthening our Knowledge on Bear Trade Through Collaboration Between TRAFFIC and the BSG

Lorraine Scotson  
Member: Trade in Bear Parts Expert Team, Asiatic Black Bear Expert Team, Bear Specialist Group  
Co-chair: Sun Bear Expert Team  
University of Minnesota  
Email: scotsonuk@gmail.com

Sarah Stoner  
Senior Wildlife Crime Analyst  
TRAFFIC, Southeast Asia  
Email: sarah.stoner@traffic.org

Globally, Asiatic black bears, Asian brown bears, sun bears, sloth bears and Andean bears are all reported in illegal international trade. Illegal trade is often surmised to be the primary threat to Asia’s bears: declines in populations have been attributed to poaching for 4 of 6 Asian bear species (IUCN 2008). However, fully quantifying the extent and impact of poaching is problematic given inconsistent reporting rates and varying enforcement effort. Since 1994 there have been 4 major International Symposia on the Trade in Bear Parts. During that time TRAFFIC has released a number of bear-focused publications that have documented and illustrated the grave nature of the international bear trade. In addition, there is a growing body of other scientific literature focused on bear trade (e.g. Livingstone and Shepherd 2014, Shepherd and Nijman 2007).

TRAFFIC’s most recent bear-focused report (Burgess et al. 2014), the first of its kind, collated reports of seizures of bears and bear parts originating from 17 countries during 2000 – 2011. It highlighted prevalent trade routes and the multiplicity of ways bears are being exploited for trade across Asia. Russia and China accounted for 69% of the trade volume equating to a minimum of 1,934 bears, primarily due to the seizure of over 6,000 bear paws. Such significant seizures in Russia and along the border with China suggest a prolific trade in bears between these 2 countries. The confiscation of live bears accounted for 15% of all seizures and the second-most commonly seized commodity after paws. It is suspected that in border regions in Cambodia, Lao PDR and Thailand, where most live bears were seized, cubs were en-route to stock bear farms in Viet Nam and China. Notably, it was not possible to convert seized bile products into a number of dead bears because some bile was likely obtained from live bears on farms, and multiple products could be sourced from a single bear, dead or alive (Burgess et al. 2014).

The release of the TRAFFIC seizure report coincided with efforts within the BSG to reassess the IUCN Red List status for all bear species (except polar bears). Within this process, the BSG’s Trade in Bear Parts Expert Team (Trade ET) reached the uncomfortable realization that while we know trade to be the major driver of decline, the data to support this are sorely lacking. According to TRAFFIC, seizures representing a minimum of 2,801 individual bears were traded across Asia over the 12-year period (Burgess et al. 2014). This number certainly fails to highlight the true volume of trade that must be occurring, given the depth of the problem as it is perceived by the scientific and conservation communities. The average number of individual bears, of 4 species, seized per year across all of Asia (2801/12 = 233) is less than the average number of American black bears legally and sustainably harvested in most U.S. states and Canadian provinces in a year (Hristienko and McDonald 2007). The illegality of bear hunting in most Asian countries, and CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) prohibition of trade in bear products across international boundaries, precludes obtaining reliable records of the true magnitude of this underworld market.

Despite this difficulty, it should be possible to collect sufficient data to reflect meaningful patterns and trends. For example, a recent publication collected data on trends in value of bear products over time in Lao PDR, demonstrating the remarkable increase in value of both wild bear gall bladders and live wild cubs. Prices of gall bladders for sale in markets were 180x higher during 2010 – 2013 than during 1991 – 1993, and prices for cubs were 2.6x higher. This suggests that demand for wild-sourced bear bile and live cubs is not abating and the rising value of products reflects the increasing incentive to poach bears (Livingstone and Shepherd 2014).

TRAFFIC has also been active in collecting data via systematic surveys of markets (e.g., Shepherd and Nijman 2007) and retail outlets (e.g., Foley et al. 2011). These surveys not only aid in gauging the scale of the trade, and some basic trends, but also provide a good indication of trade routes, sources and destinations, as well as a measure of enforcement effectiveness.
TRAFFIC’s iBase

iBase is sophisticated data collection software designed to gather many different types of wildlife crime-related information — everything from the value of a bear cub being traded at the side of the road, or the number of bear claws spotted for sale in a wildlife market, to incidents of illegal poaching of bears in the wild. The Trade ET will aid in collecting and channeling bear trade data towards TRAFFIC. BSG members are encouraged to send us all existing records you may have stored on personal databases and field records. A single piece of data may not seem valuable on its own, but as part of the larger database it will help inform future analyses of patterns and trends in trade and may aid TRAFFIC enforcement support and awareness-raising efforts.

You can also install the new Wildlife Witness Application onto your smartphone, developed in collaboration with Taronga Conservation Society Australia, and send trade information directly to TRAFFIC. TRAFFIC’s senior crime data analyst, Sarah Stoner, oversees the database and in the future will provide regular assessments of current trends in bear trade for International Bear News. We envisage that this collaboration between TRAFFIC and the BSG will lead to a more systematic and robust form of data collection and reporting, and will ultimately ensure that efforts to tackle trade are proactive and intelligence led.

Literature Cited


Illegal Trade

Understanding Attitudes Towards Bear Products in Cambodia and Lao PDR

Matt Hunt  
Co-chair, Captive Bears Expert Team, Bear Specialist Group  
Member, Sun bear Expert Team  
Chief Executive, Free the Bears  
Email: asianbears@gmail.com

Brian Crudge  
Research Programme Manager  
Free the Bears  
Email: research.ftb@gmail.com

Christine Browne-Nuñez  
Conservation Program Manager  
Conservation Education Division  
San Diego Zoo Global Institute for Conservation Research  
Email: cbrowne-nunez@sandiegozoo.org

David A. O’Connor  
Research Coordinator, Community-Based Conservation  
Ecologist  
San Diego Zoo Global Institute for Conservation Research  
Email: doconnor@sandiegozoo.org

Throughout Southeast Asia, the hunting and illegal trading of sun bears and Asiatic black bears for their body parts remains widespread, with both species being among the most highly-prized targets of poachers. We know that specific body parts of bears are used for traditional medicine (gallbladders, bile and bones) or trinkets (claws and teeth) while other parts are used in tonics (paws and bones) and restaurant dishes (paws and meat). Bear body parts have been used for such purposes for centuries, but how much do we actually understand about local perceptions of this trade? And what role can captive bear facilities (ranging from sanctuaries to zoos to bear bile farms) play in shaping public attitudes and demand for these products?

Cambodia, Lao P.D.R (hereinafter Laos) and Vietnam, despite their geographical proximity and intertwined histories, are all at very different stages with regards to captive bears. Cambodia has never permitted bear bile farming to become established thanks to a number of governmental and non-governmental agencies working together to end illegal trade in both live bears and their body parts. At the other end of the scale, Vietnam for many years turned a blind eye to the proliferation of bear bile farms (resulting in vast numbers of bears being removed from the wild and placed in bile extraction facilities). However, since 2005 the Vietnamese government has been focused on ending the trade and is now seeing a reduction in the number of bears held in captivity (from 4,500+ in 2006 to 2,000+ today). Somewhere between these two sits Laos, with large areas of forest and a long cultural history of using wildlife, and now seeing a slow (but steady) growth in the number of captive bears (used for bile extraction) throughout the country.

In an effort to improve understanding of public attitudes and awareness towards bear bile and other bear products, Free the Bears recently partnered with social scientists from the Conservation Education Division at the San Diego Zoo Global Institute for Conservation Research (SDZG) to create an innovative, quantitative survey to measure knowledge, attitudes, and intentions related to bear products across the region. Results of this survey may demonstrate what impact, if any, captive bears play in driving behavioral change (for better or for worse). Studies looking at attitudes and awareness towards bear bile have previously been conducted in Vietnam (in 2009 and 2011); however, these surveys used varying methodologies, making comparisons difficult.

As the buying, selling and consumption of bear bile and other body parts are technically illegal in both Cambodia and Laos, much thought went into the methodology employed to question members of the public about sensitive behaviors that might lead to them implicating themselves. The Randomised Response Technique (RRT) has been designed as a way...
Illegal Trade

of questioning people about sensitive topics, and has previously been successfully employed in surveying South African farmers about the killing of leopards and hyenas, as well as in the USA when investigating illegal fishing. The benefit of the RRT approach is that it assures the respondent that their answers are secret and anonymous even from the interviewer. This is achieved through the use of a randomizer tool during the interview.

For our initial pilot project it was decided to test RRT on members of the public in Cambodia, where surveys could be conducted by Free the Bears education team after workshops and intensive training by SDZG staff. In Laos, for the first round of surveys at least, it was decided that RRT would be unsuitable as we were relying on students from the local Souphanouvong University and Lao Women’s Union who would have less training in survey techniques. In addition, by using different approaches for the two countries, we will be able to evaluate which method is more effective. Training of the local teams in Cambodia and Laos took place in September 2014. By the end of October >1,000 people were surveyed in Laos alone. The Cambodian surveys are expected to take longer to complete due to the more specialized survey techniques and smaller survey team; however, we hope to have first results for both countries by mid-2015.

Ultimately the results of these surveys will enable us to monitor and measure the impact of captive bear facilities (like our Free the Bears sanctuaries, some bear farms that encourage visitation, or even restaurants that house bears) on public awareness and attitudes towards the use of bear products. Crucially it will also provide insight into patterns of use and the market demand for various bear products. They will help us to shape education programs on-site at our bear sanctuaries, and will give us an understanding of the impact of bear bile extraction facilities in creating or feeding a demand for bear bile.

Over time, we hope to begin tracking the changes in consumer (and potential consumer) attitudes, something that ideally should have begun many years ago! Just weeks before the surveys began, the Free the Bears team in Laos was called upon to assist in the rescue of two Asiatic black bears that had been incarcerated in a rusting metal cage atop a slowly sinking pontoon within a popular restaurant just outside of the capital city of Vientiane. We had been aware of the plight of these bears for many years, but were unable to take action until either the owner agreed to hand them over or the Lao authorities applied local wildlife laws and took action. After a difficult rescue both bears were safely delivered to Free the Bears Tat Kuang Si Bear Rescue Centre in Luang Prabang.

In Southeast Asia, people may encounter bears in bile extraction facilities, restaurants, casinos, homes, rescue centers, crop fields, palm oil plantations, or indeed the forest. The nature and frequency of encounters may impact a person’s behavior and attitude towards bears. Hopefully, with an improved understanding of local perceptions and enhanced awareness programs guided by the knowledge gained in these surveys, we can ensure that the captive bear population in Laos never reaches the devastating level attained in Vietnam before attitudes finally, but perhaps belatedly, changed.

Acknowledgements

Thanks go out to all of our supporters and donors whose generosity makes our work in Cambodia and Laos possible. These surveys were made possible thanks to Perth Zoo Wildlife Conservation Action as well as the Margaret Dawbarn Foundation, managed by Perpetual. Additional thanks are also due to The Perpetual Foundation - Estate Robert Vincent Udny Rothwell Account Wildlife Preservation Trust.
Human Bear Conflicts

Country-wide Range Mapping of Asiatic Black Bears Reveals Increasing Range in Japan

Koji Yamazaki
Member: Asiatic Black Bear Expert Team, Bear Specialist Group
Ibaraki Nature Museum
e-mail: yamako@j.email.ne.jp

Yoshikazu Sato
Rakuno Gakuen University

In the last decade, mass intrusions of Japanese black bears have been occurring regularly, and have caused serious damage both to bears and humans. Mass intrusions refer to episodes when bears range into human-settled areas and numbers of nuisance kills are 2–3 times higher than normal years. However, there is not yet an accurate national level assessment of bear population size or geographic range. A rough country-wide population estimate was made by Ministry of Environment in 2010 (estimated range was 13,000–30,000). However it has very wide confidence intervals, and is generally believed to be an underestimate. Much uncertainty remains: the population could be stable or could be increasing, and large numbers of bears have been killed as nuisances recently.

One way of assessing whether the population is increasing is through accurate range-mapping. Previous country-wide range maps were produced in 1978 and 2003, by the Ministry of Environment, based on surveys of local people. The survey protocols involved dividing the country into 5 x 5-km cells in which interviews or questionnaires about bear occurrence were given to local residents. Information was obtained from at least 2–3 people in each cell, such as hunters, foresters, and wildlife rangers. Between these 2 survey periods, bear range expanded 6% (cells in which bear occurrence was confirmed increased from 3,789 (28%) cells to 4,511 (34%) cells of a total of 13,315 surveyed cells).

With this background, we, the Japan Bear Network (JBN), conducted a country-wide range mapping project of Japanese black bears during 2011–2013, with a grant from the Environment Restoration and Conservation Agency. Through this project, JBN created an up-to-date, country-wide range map using multiple and diverse data sources including nuisance kill information, bear observations, and bear-caused human injury or human property damage information. Information came from each local government, and from JBN members. However, there was one difference between the JBN range survey and the previous two surveys made by Ministry of Environment. Because of budget and time limitations, the JBN range map was focused on the front line (i.e., leading edges) of the bear distribution. The gathered information did not completely cover interior portions of the bear range (i.e., parts of grids in remote areas).

It is clear from the results that the bear distribution area in Japan has increased over the last decade. Because we were not sure of bear range use in some grids in remote areas, we did not calculate the magnitude of this increase, but the range expansion seems greater than the expansion that occurred from 1987 to 2003. Indeed, in some areas, bears have reappeared after being extirpated over 100 years ago, causing great surprise among local residents.

For the Kanto region (Tokyo and the surrounding areas) in central Honshu Island, we compared the distribution data between normal years and years with bear mass intrusions into human-settled areas. It was clear that in the mass intrusion years, bear range greatly expanded, with the front line of the range only 30 km from the capital, Tokyo. These results indicate the urgency of bear range management.

Through this project, we also have done some surveys in Kyushu Island, where bears...
were believed to have been extirpated. The last certain record was on 1 December 1957 (a dead cub), though there have been unconfirmed sighting records since then. We did extensive bear track surveys and camera trap surveys for 3 years in the Sobo-Ktamuki Mountains (where the last bear was reported), with cooperation of local residents, hunters, and JBN members. Unfortunately, we could not find any evidence of bear existence. Thus, we must consider bears to be absent from Kyushu Island. This extirpation is especially sad because this island is where bears historically first arrived into Japan from the Eurasian continent via the Korean peninsula. During our surveys we found 4 old skeleton specimens of Kyushu bears dating from B.C. 360–172 to 1932. We analyzed the mitochondrial DNA haplotypes for 3 of them. Two were new haplotypes and the other had the same haplotype as a population at the west end of Honshu Island, which is the closest population to Kyushu Island. This result will be submitted to a scientific journal. The full report of our project can be downloaded from JBN website (in Japanese): http://www.japanbear.sakura.ne.jp/cms/pdf/2014jbnhoukokusho.pdf

Consequences of mass-intrusions by Japanese black bears

<table>
<thead>
<tr>
<th>Year</th>
<th>People injured</th>
<th>People killed</th>
<th>Bears killed as nuisance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>109</td>
<td>2</td>
<td>2,021</td>
</tr>
<tr>
<td>2006</td>
<td>145</td>
<td>3</td>
<td>4,340</td>
</tr>
<tr>
<td>2010</td>
<td>147</td>
<td>2</td>
<td>3,010</td>
</tr>
<tr>
<td>2012</td>
<td>75</td>
<td>0</td>
<td>2,474</td>
</tr>
<tr>
<td>2014</td>
<td>78</td>
<td>0</td>
<td>2,169</td>
</tr>
<tr>
<td>(as of September)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Detail of range map in Kanto region for Japanese black bears during 2004-2013 showing differences between the edge of the range during normal years (top panel, green cells highlighted) and mass-intrusion years (bottom panel, orange cells highlighted).
Alopecia or chronic hair loss begins inconspicuously in Andean bears. Elongated lighter patches on both sides of the body characterized by a less dense hair cover are the only sign at the beginning (bottom left). This condition may stabilize or even disappear after seasonal regrowth of hair, but over time it most often progresses. In the end, at least the lumbar region becomes hairless (bottom right). Some individuals suffer from complete hair loss on almost the entire body. A first survey circulated in 2002/03 to European holders revealed that 13 individuals living at that time in 10 zoos were affected by alopecia. Since then another six were reported. Two of them were wild-born females. The condition is also known from wild born bears living in facilities in South America (pers. comm. A. Bracho, X. Velez-Liendo, J. A. Plenge). As in North American zoos (Owen et al. 2009) mainly females are affected. To date, 26 females with alopecia have been confirmed. They represent 40% of the European population of living and dead adult females, whereas only 4% of the male population displayed alopecia. The age at first detection of hair loss ranges between 3 y and 20 y. According to a few holders, the first signs became obvious after shifts in group composition or transports. Most others did not find a connection to changes in the environment. None of the commonly applied treatments against skin disorders had positive long-term effects.

In order to determine causes of the syndrome, a working group including zoo veterinarians from Leipzig, Paris and Thoiry and veterinary experts from different disciplines at the Universities of Leipzig (Germany) and of Lyon (France) has been established. They set up a protocol for blood and tissue sampling. This has been circulated from 2010 on to zoos participating in the EEP (European endangered species breeding program) for the species with the request to take samples of affected individuals.
Studies on husbandry practices, medical data and endocrinology

In 2010, Langguth et al. published the results of their retrospective study about clinical features and epidemiology of the Alopecia Syndrome. Based on their findings they concluded four possible hypotheses that could influence the development of the disease, which were 1) an allergic process, 2) an autoimmune reaction, 3) endocrine deregulation and stress, and 4) nutritional factors.

Thereupon several projects were initiated at the University of Leipzig to approximate each possible cause. In a detailed checkup of three affected females in 2011, Schachtner et al. found that reproductive organs were co-affected even though the severity of symptoms was not congruent with their skin problems. Currently, questionnaires from twelve European zoos about diet and housing conditions are being evaluated. Furthermore, all available post mortem records and hematology and serum profiles will be interpreted.

To test the hypothesis of an involvement of the endocrine system in the development of the Alopecia Syndrome fecal longitudinal hormone monitoring of affected and healthy Andean bears was initiated, because it allows the broadest sampling possible. Five zoos collected samples of twelve bears throughout 2013. Currently they are being analyzed for cortisol, estrone sulfate and progesterone.

Classical histopathology at Leipzig University revealed inflammation as well as fungal infections of the skin in several alopecic bears from German zoos (Jäger et al. 2013). For comparability these samples were transferred to the University of Lyon for further investigations.

Histopathological deep screening study on the alopecia syndrome of Andean bears

The French veterinary team worked on the histopathological aspects of the alopecia syndrome of Andean bears. Normal histological features of the skin in this species were specified using biopsies from 16 healthy Andean bears from 11 zoos. Skin biopsies of 15 alopecic bears from 8 institutions revealed several abnormalities, the most significant consisting in inflammatory lymphocytic infiltrates and giant cells directed against the isthmic portion of the hair follicles, resulting in follicular atrophy.

A clinical survey targeting alopecic Andean bears helped highlight some of the clinical features of the disease. Alopecia was extensive with bilateral symmetry. Spontaneous resolution was observed in some bears, as well as seasonal fluctuations. Pruritus was described in half the cases.

Clinical features and histopathological findings were suggestive of an immune-mediated component of the disease. Further investigations are needed to confirm this hypothesis, to establish a correlation between histological lesions, clinical features and other areas investigated, in order to determine the possible pathogenesis.

Acknowledgements

Thanks to all EEP participants. They provided samples and relevant information about their Andean bears and husbandry schemes. Also we thank the Leibniz Institute for Zoo and Wildlife Research for the provision of additional samples and the Institute for Veterinary Pathology at the University of Leipzig for their expertise and quick help in upcoming questions. Fundings for this project and future examinations was provided by a DVM thesis grant from the AFVPZ (Francophone Association of Zoo Veterinarians).

Literature Cited


Movements, Population Ecology, and Harvest Vulnerability of Black Bears in Urban/Suburban Habitats within the Asheville Watershed

Nicholas P. Gould  
Fisheries, Wildlife, and Conservation Biology Sciences  
North Carolina State University  
Turner House, Box 7646 Raleigh, NC 27695-7646  
Email: npgould@ncsu.edu

Christopher S. DePerno  
Fisheries, Wildlife, and Conservation Biology Sciences  
North Carolina State University  
Turner House, Box 7646 Raleigh, NC 27695-7646  
Email: csdepern@ncsu.edu

Colleen Olfenbuttel  
Division of Wildlife Management  
North Carolina Wildlife Resources Commission  
1293 Laurel Bluffs, Pittsboro, NC 27312  
Email: colleen.olfenbuttel@ncwildlife.org

In North Carolina, black bear (Ursus americanus) populations occupy 60% of the state and their range continues to expand. Additionally, the human population in North Carolina has increased and growth continues unabated. Humans and black bears are now living in close proximity and some areas of North Carolina may have reached or exceeded the social carrying capacity. In several areas, population management options appear limited, as hunting is often restricted in residential and urban developments. Additionally, no data exists on whether urban/suburban environments serve as source or sink populations for surrounding areas, if mortality rates differ between hunted and unhunted bear populations in North Carolina, if bears in urban/suburban areas are vulnerable to harvest, or if hunting strategies can manage bear populations and human-bear interactions in and near residential developments.

Over the next four years, we will be collecting information on the ecology of black bears in urban/suburban areas. Specifically, we will collect data on survival rates, causes of mortalities, and movements of bears in urban/suburban areas, and determine features of travel corridors, and determine location and characteristics of den sites. We will compare these data between bears in hunted and unhunted populations, as well as between bears in urban/suburban areas and in rural areas. Ultimately, the results will be used to assist the North Carolina Wildlife Resources Commission in developing science-based management strategies for bear populations in North Carolina. This project addresses and builds upon
modern applications for managing large carnivores in urban areas and will be valuable to the larger scientific community.

This study is located in western North Carolina and centered on the urban/suburban habitats in and around the city of Asheville, North Carolina. Asheville is a medium-sized city (117.2 km²) with approximately 83,000 people, located in Buncombe County in the southern Appalachian Mountain range, and is part of the southern Blue Ridge physiographic province of the Southern Appalachian region (Figure 1).

We used landowner reports of black bears to target amenable homeowners to establish trap lines on/near their property. We attempted to obtain a spatially balanced sample of 40 bears (25 females, 15 males), within, or adjacent to, the city of Asheville. Bears were captured in culvert traps and, once captured, were fitted with a GPS radiocollar (Vectronics, Berlin, Germany) that did not exceed 2-3% of the animal's body weight. We used the virtual fence application built in to the GPS collars to obtain locational data every 15 minutes (i.e., fine scale data) for when bears are inside Asheville city limits (i.e., inside the virtual fence) and every hour when bears are outside the city limits.

From 15 April through 13 September 2014, we captured and collared 44 bears (24 adult females, 9 adult males, 5 yearling/subadult females, 6 yearling/subadult males). We identified 11 family groups among the captured bears, including 3 family groups with yearlings and 8 groups with cubs. Our trapping efforts resulted in the original capture of 55 bears and 10 recaptures, for a trap success rate of 4.0% during 1,635 trap nights. The average adult male (n = 10) and female (n = 24) bear weighed 316 lbs and 202 lbs, respectively. The average male (n = 13) and female (n = 8) yearling/subadult weighed 119 lbs and 103 lbs, respectively. On 1 May, we captured a 163 lbs male yearling, and on 25 April, we captured a 571.5 lbs adult male; these bears represent the largest weights within age class that we observed in the spring. We have collected approximately 150,000 GPS locations on bears (n = 44; Fig. 2). Thirty-four (77%) bears have locations inside Asheville city limits.

Four GPS-collared bears were found dead during this reporting period. Two were killed by vehicles on Interstate 26, and two were shot and killed illegally. Fieldwork will continue for three more seasons and will be followed by data analysis in 2017–2018. Project details and information can be found on our website: https://www.facebook.com/urbanbearstudy.

Acknowledgments
The project was funded by the Pittman-Robertson Wildlife Restoration Grant and is a joint research project through the North Carolina Wildlife Resources Commission and North Carolina State University. We are grateful to all the homeowners that granted us permission and access to their properties.
Making Scat Count: Citizens Help Inventory Grizzly Bear Populations in Alberta, Canada

Terry Larsen, Sarah Rovang, Anja Sorensen, and Gordon Stenhouse
Foothills Research Institute
Hinton, Alberta, Canada
tlarsen@foothillsri.ca

The ability to accurately inventory and monitor bear populations is fundamental to guide management actions and direct conservation and recovery efforts. Non-invasive techniques such as DNA hair snags have been used widely in North America as a robust means to estimate bear population size over space and time (Proctor et al. 2010). As a result, these approaches are now used widely in many countries. Although useful, application of DNA hair snag projects can be cost prohibitive, particularly over large geographic areas, making repeated surveys difficult to implement at time intervals necessary to measure changes in bear populations (Stetz et al. 2010).

In Scandinavia, researchers have successfully used DNA from scats collected by hunter volunteers to obtain robust estimates of population size, which allows for monitoring of brown bear population trend (Kindberg et al. 2011). Until recently, application of this technique in North America has been problematic due to inconsistent DNA extraction success (Wasser et al. 2004). In 2013, the Foothills Research Institute Grizzly Bear Program (FRIGBP) in collaboration with a Norwegian DNA lab improved the DNA extraction technique yielding more consistent results using grizzly bear scats from Alberta. This important advancement has taken us one step closer to using scat DNA as a technique to monitor populations of bears in Alberta.

The advantage of the Scandinavian approach is that genetically-based inventories of bears can occur across large geographic areas without the exorbitant costs and logistical difficulties typically associated with DNA hair snag surveys. However, this approach is not without flaws and presents numerous challenges, some of which relate to data quality. If population estimation is the research objective, careful design is imperative as heterogeneity in detection probability, further compounded by the low detection probability of grizzly bears, can lead to imprecise estimates that question their value for management (Boulanger et al. 2004; Bellemain et al. 2005). Following this, there is the need to evaluate the robustness of the scat DNA method to estimate bear population size, and to determine the possible impacts of using volunteers to collect these data.

Implementing scat DNA surveys using a citizen science approach could prove to be highly valuable to grizzly bear conservation in Alberta where population estimates derived from past DNA hair snag surveys have not been widely accepted by the public. In Scandinavia, hunter participation was instrumental in local acceptance of the results of brown bear population surveys (Bellemain et al. 2005). In September of 2014, the FRIGBP launched a pilot citizen science based scat DNA project within the Yellowhead bear management unit to evaluate the DNA scat technique as a potential management tool. Our objectives were to 1) engage local hunters, trappers, and other user groups to participate in the inventory work during the 2014 hunting season (August-October); 2) supplement citizen sampling using biological staff; 3) compare population distribution and abundance estimates obtained from both scat and hair snag (May-July, 2014) DNA inventories; and 4) evaluate the costs and benefits associated with each approach.

Although engaging citizens to participate in scat collection is fundamental to the success of this project, we need an efficient way to gather and store information. To do this, we have
developed a smartphone application (grizzlyscatapp.ca) for Android and iPhone devices. This app, once activated, records the travel route of the user. When a scat is located, the user can scan a unique barcode associated with each sample vial, which links the spatial and temporal information of the collection site. The app automatically transmits data to our network database for storage. We have also integrated automatic text messaging to keep users informed on the status of sample processing and laboratory analysis to help ensure ongoing interest and participation. For citizens without a smartphone, we will provide a GPS unit capable of tracking the user’s route and recording the locations of scat samples. To ensure adequate sampling across the study area (Kindberg et al. 2011), biological staff will supplement citizen scientist’s efforts by following pre-determined transects along linear features (pipelines, seismic lines, and roads) and forestry cutblock edges.

We believe that this project will allow us to further understand how a citizen science approach to gather non-invasive genetic samples can be used to monitor bear populations, and in addition, this research will assess how different approaches can be used. Results from this pilot study will be available later in 2015.

Literature Cited
Boulanger, J., G. Stenhouse, and R. Munro. Sources of heterogeneity bias when DNA mark-recapture sampling methods are applied to grizzly bear (Ursus arctos) populations. Journal of Mammalogy 85:618-624.

Artificial Den Creation in Coastal British Columbia, Canada

Helen Davis
Artemis Wildlife Consultants
hdavis@artemiswildlife.com
250-388-5515

A project is underway on Vancouver Island that is attempting to create black bear dens in existing forest structures and in artificial structures. The project is aimed at increasing the availability of black bear dens in the Jordan River watershed on Vancouver Island using a new and innovative approach.

Black bears in coastal British Columbia (BC) use large diameter (mean = 143 cm) trees or wooden structures derived from trees (logs, windfalls and stumps) for winter dens (Davis 1996) and generations of bears often reuse the same den (Davis et al. 2012). Black bears den from three to six months in coastal BC and females give birth to cubs in their dens. Coastal black bears likely use only wooden structures in BC because of the cool and wet weather during the winter, unlike other parts of North America where they may dig dens in the earth or den in nests on the ground.

Current and past land management practices, including hydro-electric development and forest harvesting, removes large trees from the potential den supply on Vancouver Island. The BC provincial government does not provide any regulatory protection for these structures; however, some forest companies take the initiative to conserve dens during harvesting that are found during layout (i.e., preparation for harvesting).

Helen Davis of Artemis Wildlife Consultants installed 3 artificial black bear dens in July 2014. The dens simulate naturally-occurring dens in hollow logs but are made from plastic culverts closed at one end and open at the other, to allow entry by black bears. An industrial designer is also designing artificial dens made of more suitable materials that will more closely mimic natural dens. Davis hopes that artificial den structures can fill the gap between potential declines in den supply due to the removal of existing dens and decay of residual structures and creation of new dens through appropriate forest management at the landscape scale.

The effectiveness of this new pilot approach to creating artificial dens will be monitored and assessed for effectiveness by
Biological Research

Unity College Bear Study: A Student Perspective

Jonah Gula
Undergraduate Student
Wildlife Biology Program
Unity College
Unity, Maine USA
Email: JGula11@unity.edu

The Unity College Bear Study (UCBS) was created in 2012 in response to the college president’s challenge to develop new ways to attract students to the wildlife degree programs. The idea grew from simply deploying our own collar on a bear in the Maine Department of Inland Fisheries and Wildlife’s (MDIFW) study to actually establishing our own black bear study. Dr. George Matula, the project’s creator and supervisor, worked with MDIFW to attain the special permissions for a team of undergraduate students to live capture bears in and around Unity, Maine. As the project took off, faculty, staff, and students all got behind the idea and volunteered many hours in preparation for the first field season in May 2013.

We took advantage of the opportunity to collect as much data as possible, involve a large number of students, and maximize the potential for student research projects. During spring 2013, a dozen or so volunteer student teams helped develop protocols, acquire and organize equipment, write grants, create databases, program and modify VHF and GPS/satellite col-

Literature Cited


International Bear News Fall 2014, vol. 23 no. 3
lars, test trail cameras, and acquire permissions from 68 landowners in the area. The amount of volunteer effort that went into the prep-work ensured that the summer trapping team was well-equipped and prepared for field work. In fact, without the student teams’ work then and now, our subsequent field seasons would not have been nearly as successful.

A team of twelve students, including myself, were led by Dr. Matula and MDIFW bear study veteran and Unity College alumnus Lisa Bates. They intensively trained the team, and oversaw all bear immobilizations. During the 53-day trapping period, the two crews maintained 102 pre-bait and trap sites in several towns surrounding Unity, Maine. The final success of the pilot field season came as a surprise to everyone involved in the study, including MDIFW biologists - we had a total of 11 captures of eight different bears. Three collars, 1 VHF and 2 GPS/satellite, were deployed on females and provided location data for these bears. Unfortunately, the two GPS/satellite-collared sows were both killed by vehicles before the summer ended, however, they did provide enough data to preliminarily indicate that bears in our study area have much larger home ranges and travel more than bears in MDIFW’s study areas.

After the first trapping season during the fall semester, we had a better idea of data to be collected, how it should be organized, where bears are located within the area, and how to best move forward. Student teams were at work again with data organization, DNA analyses, spatial analyses, grant writing, and radiotelemetry on the remaining VHF-collared female. I was responsible for keeping tabs on the female, identified as UC004, as frequently as I could fit it into my class schedule, and eventually identified the area where she was preparing a den.

In February 2014, with the help of the MDIFW bear crew, the student trapping team from the summer successfully handled UC004 and deployed a GPS/satellite collar on her, allowing us to more closely monitor her and collect a greater amount of location data.

As we entered the 2014 trapping season, we were much better prepared for the challenges that come with running such a high-profile study. I and another 2013-season student acted as leaders for the 2014 trapping crews. Over the 57-day trapping period, we had 14 captures of 11 individual bears, including UC004, who we were able to equip with a video camera collar. Although we do not know what the footage will reveal, we hope to get a better understanding of her behavior, especially from videos during the breeding season. Additionally, we collared two new females, a mother and daughter, and one yearling male. We anticipate the two currently collared females will have cubs this winter. As student teams get back to work this fall, we look forward to the two den visits and are hopeful that we will be adding the first cubs to our sample of bears in the area.

Speaking from personal involvement, UCBS has provided students with unprecedented experience at the undergraduate level and has created dozens of opportunities for student research projects. In addition to allowing students to be involved in most aspects of the project, we are proud to be contributing to MDIFW’s nearly 40 years of black bear research and management of what is considered the largest bear population in the eastern United States.
A New Black Bear Density Estimate for New Mexico?

Rick Winslow  
Bear and Cougar Biologist  
New Mexico Department of Game and Fish  
Frederic.winslow@state.nm.us

New Mexico Department of Game and Fish currently estimates the density of black bear populations in New Mexico between 9.4 and 17 bears/100 km² based upon a 10-year study of black bear ecology in New Mexico (Costello et al. 2001). Recent studies conducted in Arizona (Atwood et al. 2012) and Colorado (Apker et al. 2009, personal communication) indicate black bear densities in adjacent habitat of the same or similar quality as found in New Mexico are higher, 20 bears/100 km² in Arizona and 20-85 bears/100 km² in Colorado, depending upon local mast availability. In New Mexico, bear populations seem to be stable or growing based on anecdotal observations, high levels of conflict even during years with abundant mast, age ratios of harvested bears and other mortalities that indicate healthy populations; and documentation of bears breeding and living in “non-traditional” habitats in many parts of the state. Given the results from Arizona and Colorado, and new methods employing non-invasive DNA hair sampling, the Department of Game and Fish initiated a 3-year study to reexamine bear densities in many parts of the state in 2012. Preliminary results indicate that black bear populations in the Northern Sangre de Cristo Mountains are higher than current estimates suggest (20-25 bears/100 km²). Significant portions of identified bear habitat in the state have been sampled including; the Sangre de Cristo Mountains, the Sacramento Mountains and the Sandia Mountains. Other methods will also be employed using the genetic data to estimate population sizes, population structure and to estimate black bear densities in the sampled areas. The information will be used to inform management direction statewide. These genetic techniques using mark/recapture models have been successfully used to refine population estimates and help direct management of black bear and other bear species worldwide, replacing the “older” invasive radio/GPS collar studies.

Literature Cited

Jerry A. Apker, Paul Lukacs, John Broderick, Brian Dreher, Julie Mao, Allen Vitt. Unpublished data.

The Maine Bear Referendum

Jennifer Vashon  
Bear Biologist  
Maine Department of Inland Fisheries and Wildlife  
Email: Jennifer.Vashon@maine.gov

On November 4th, Maine voters will decide whether to ban the use of bait, dogs, and traps to hunt bears. The Maine Department of Inland Fisheries and Wildlife and our bear biologists are opposed to this referendum because it will eliminate the most effective tools for controlling the State’s large bear population.

Currently, Maine has one of the largest bear populations in the country (>30,000), and the population is increasing due to improved habitat conditions and several years of harvest below objectives (~3,000/year) due to a decline in hunter numbers. Bear population goals and harvest strategies are set through a formal public planning process that balances the wide diversity of perspectives held by Maine’s citizens. We used data from 40 years of monitoring radio-collared black bears to
inform our management decisions that over the years has led to numerous changes in hunting seasons and regulations. Our models indicate that approximately 15% of the bear population (3,500-4,500) needs to be harvested each year to stabilize the population and prevent expansion into densely settled areas.

Maine is the most forested state in the country, and our dense understory makes ‘still hunting’ for bears extremely difficult, the only method that would be permitted if this referendum passes. Only 3% of still-hunters are successful resulting in a harvest of about 200 bears annually. If this referendum passes, with the low success rate of still-hunters, we would need well over 100,000 hunters pursuing bears to achieve our harvest goals. Currently, about 11,000 people hunt bears in Maine.

We have very few options to increase hunter numbers and bear harvest because we already have a long bear hunting season, a spring season is prohibited by statute, bear license numbers are not limited, and deer hunters can harvest a bear without a permit. Although 175,000 resident deer hunters can harvest a bear, about 100 bears are taken. Therefore, we expect that if the referendum passes, the annual bear harvest will decline causing the population and conflicts to rise.

The use of bait, hounds, or traps to hunt bears is permitted in the majority of jurisdictions in North America. Of the 32 states with bear hunting seasons, 23 allow at least one of these methods. In Canada, 9 of 11 provinces allow one or more of these hunting techniques. The only trapping devices that are legal in Maine (culvert traps and cable-foot restraints) have been approved by animal care committees across the country for use by bear researchers and in response to bear conflicts.

Another common question in this debate, is why biologists discourage feeding bears but allow hunters to place bait. Bear managers in Maine and across North America discourage feeding black bears because it can lead to habituation. However, placing bait in the woods is a very different activity. Because bait must be placed at least ¼ mile from dwellings and hunters limit scent, baiting may actually reduce the number of conflicts by drawing bears away from people, communities, and backyards. In fact, Maine experiences a lower rate of conflicts (# of conflicts/1000 bears) than states that do not allow bear baiting. Even when factoring in the number of people in each state, Maine still has one of the lowest conflict rates in the east.

Data from 40 years of monitoring radiocollared black bears in Maine also shows that bait is not influencing bear population growth. Bears in Maine have similar or lower reproductive rates and cub survival rates than bear populations where bears are not hunted with bait.

The concept of ‘fair chase’ is pervasive in the debate surrounding the referendum. The fact that only about 25% of bear hunters using bait, hounds, or traps successfully harvest a bear is a strong indicator that these methods meet a reasonable definition of fair chase. This success rate is far lower than what we see in many other types of hunting.

Wildlife managers across North America select the appropriate management tools to meet social and biological management goals for the species they manage. If it passes, this referendum will restrict the management tools available to Maine’s bear biologists to respond to changing biological and social conditions.

Brain Lesions a Mystery in Nevada

Carl Lackey
Game Biologist
Nevada Department of Wildlife
clackey@ndow.org

In January of 2014, bear managers picked up a yearling male black bear south of Reno, Nevada, that was lying sternal in a snow covered field, reportedly very lethargic and easy to approach. The biologists, after capturing the 50-pound animal without use of immobilization drugs, took the bear to Nevada Department of Wildlife’s (NDOW) veterinarian, Dr. Peri Wolff for evaluation. In addition to the behavioral signs observed, the bear was observed making subtle shivering motions that were considered consistent with hypothermia. The bear was warmed and offered a warm dextrose solution by syringe. The next day the bear was still unable to right itself and would only consume food and water that was placed directly into the mouth. The subtle shiver-like motions were again noted. Due to a lack of improvement in the bear’s condition after supportive therapy, the decision was made to euthanize the bear and a necropsy was performed.

Fresh and formalin fixed tissues and serum samples were sent to the Oregon State University, Veterinary Diagnostic lab, Corvallis, OR. Significant findings included a non-suppurative encephalitis. Tissues were negative for Canine Distemper Virus (CDV), Rabies and West Nile Virus (WNV), however the bear did have a titer to West Nile Virus. Virus isolation attempts for other viruses were negative. At this point in January the bear’s behavior and cause for the encephalitis were a mystery to us but no great concern.
In March, 2 more bears were captured, both displaying unusual behavior. I was able to walk up and hand-tranquilize a 225-pound, 3-year-old male in Incline Village, Lake Tahoe, that was crawling around near a city park with the use of its front legs only. It was assumed the animal had been hit by a vehicle and had suffered spinal damage, although there was no visible trauma. This bear was immobilized and humanely euthanized, then delivered to the Wildlife Health Lab, as was a yearling female a couple weeks later that was reported north of Reno acting like what I can only describe as extremely over-habituated behavior. She was like a pet dog that refused to stay away, even after being yelled at and lightly kicked in the nose as she nonchalantly approached me. Both of these bears were in average physical shape and appeared healthy. The female was noted to display a slight tremor during the brief periods that she would sit. Necropsies were performed and samples were sent for evaluation. The male had milder changes present in the brain and spinal cord; however the female had similar changes to the first bear with a non-suppurative encephalitis. Both bears were also tested for WNV, CDV, Canine Adenovirus-1 (CAV-1), equine Herpes virus 1 and 9 and general screening for herpes virus and retrovirus.

In June, NDOW started receiving calls about a very bold bear in Glenbrook, Lake Tahoe. Unlike the previous three bears, this bear was a recapture, having been caught originally as a cub in 2011. Now three years old, this 180-pound male was approaching people at extremely close distances (close enough to touch), was daytime active around homes, and crawling into vehicles. This bear would have been euthanized regardless, based on his behavior, but I was definitely curious if it could also have the brain lesions seen in the other bears. This bear also displayed a non-suppurative encephalitis and was negative for multiple viral tests.

In August a male black bear was submitted to the Wildlife Health Lab that had been struck and killed by a car. This animal’s brain was submitted for histopathology and viral testing. No lesions were found in the brain and viral testing was negative.

In-depth testing to date on tissues from all four bears at California Animal Health and Food Safety Laboratory and Oregon State University, Veterinary Diagnostic Laboratory, has failed to come up with a specific cause for the changes seen in the brain. The lesions suggest a virus is responsible but it remains unclear as to the type or source of virus, or the possible impacts to the bear population. If you have information that may assist us please address comments to clackey@ndow.org or pwolff@ndow.org.

Management Corner

Park County, Wyoming Carcass Management Program

Dusty Lasseter
Bear Wise Community Coordinator
Wyoming Game and Fish Department
Cody, Wyoming
Dustin.Lasseter@wyo.gov

A pre-emptive approach to bear management is needed where human communities and bear populations overlap. Managing bear attractants such as domestic carcasses in developed areas is likely to minimize the occurrence of human-bear conflicts, maximize human safety, and reduce management related bear mortality.

The Park County, Wyoming Carcass Management Program is a domestic livestock carcass removal service available to livestock producers, hobby farm owners or any livestock owner who live in areas of Park County, Wyoming, that have historically experienced a high number of human-bear conflicts. The program was initiated on June 1, 2008, in central and western Park County in northwest Wyoming. The Wyoming Game and Fish Department developed and implemented the program with fiscal support from the Park County Predator Management District and Wyoming Animal Damage Management Board, and continues this support with regular grant writing efforts.

The goal of this program is to minimize human-bear conflicts and increase human safety by removing carcasses that attract and hold grizzly bears in areas that are in close proximity to humans, ranch buildings, feed lots, or calving areas. This program serves as an alternative to disposing of livestock carcasses in traditional boneyards and provides producers with a cost effective means of managing a significant grizzly bear attractant. In addition to large producers, the program also provides any livestock owner or smaller “hobby farm” owners a means of effectively removing grizzly bear attractants.

Park County, Wyoming, experiences a higher number of human-bear conflicts than any other area in Wyoming or the Greater Yellowstone area. From 2008 – 2012, 477 human-bear conflicts occurred within Park County, an average of 95.5 conflicts each year. Without preventive action, the trend in human-bear conflicts is expected to increase. As the agency responsible for dealing with large carnivore/human conflicts, the Wyoming Game and Fish Department implemented this
program in a proactive fashion to determine its efficacy in reducing conflicts and providing for better bear awareness from landowners to increase human safety.

The program is modeled after an existing carcass management program in the Blackfoot River Valley in west central Montana. The Park County program utilizes an independent contractor that provides qualifying landowners with the carcass removal service on an on-call basis and is provided at no cost to the landowner. Frequency of service depends on landowner participation and need. The contractor receives calls directly from landowners and is expected to respond within a reasonable amount of time considering factors such as time of year and location of the carcass.

Carcasses are retrieved from private land as directed by the landowner’s request and then transported to the Park County landfill. Pickup priority is given to those areas with the highest potential for human-bear conflicts, such as areas that are in close proximity to established carcass dumps or carcasses that are in close proximity to human development (i.e. houses, outbuilding, or corrals). General priority areas have been established within the qualifying zone in the event that resources and time are limited.

As of Spring 2014, approximately 30 producers/landowners in the area are participating in the program and a total of 650 carcasses have been retrieved since the program began in 2008. Beginning in 2013, several large ranches in Park County started using the program, which has effectively doubled program use. With the recent expansion of the program, most of the ranches that are eligible for the program are currently participating.

When used in conjunction with other methods of storing attractants (i.e. bear-resistant feed barrels/garbage cans, electric fencing), this program has the potential to significantly reduce human-bear conflicts and may also aid in decreasing livestock depredations caused by grizzly bears. Beyond the simple quantification of the volume of bear attractants removed, this program has had a positive impact on producers in the area as well as increasing tolerance of bear activity and showing an agency addressing human-bear conflicts in a proactive fashion. Although, this program may not be effective for every community in bear country, it has proven to be a reasonable solution for Park County residents.

Workshop Announcements

22nd Eastern Black Bear Workshop, April 26-29, 2015. Louisville, MS

The purpose of the Eastern Black Bear Workshop is to bring together state/provincial biologists, federal biologists, and university researchers with responsibilities for managing black bear populations in the eastern USA and Canada to discuss issues important to the management, conservation, and perpetuation of those black bear populations. EBBWs are inherently different from general conferences. Whereas conferences have the purpose of sharing information through the presentation of research and management papers, EBBWs are designed not only to share information, but more specifically to discuss and find solutions to problems of managing bear populations at the regional level.

Papers and Posters

There will be a poster session and a limited oral paper session. The poster and limited oral paper session are open to anyone wishing to submit an abstract. Consult the website http://www.easternblackbearworkshop.org/ for more information.

12th Western Black Bear Workshop, May 12-14, 2015. Canmore, AB.

Alberta Environment and Sustainable Resource Development (ESRD) invite those managing bears in western North America to join us in Canmore, Alberta, Canada on May 12-14, 2015 for the 12th annual Western Black Bear Workshop. The theme of the workshop will be “Living and Working in Bear Country”.

In addition to the main theme, we will have jurisdictional updates, discussions on bear predation of ungulates, fostering and rehabilitating bear cubs, population monitoring/management, and human dimensions of bear management. There may be other topics added as we receive abstracts over the next few months. Please mark your calendars for the workshop and watch for the Call for Papers in the near future. Consult the website http://deer-elk-bear.com/western-black-bear-workshop/about/ for more information.
Student Forum

Truman’s 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

- Follow the links to request an invitation
- Do NOT reply to list serve messages using your “reply” button. You must return to Truman to respond within the list serve or else other members will not receive your response.
- 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.

Publications

Recent Bear Literature

Marion Schneider
Email: MFSchneider@gmx.de

If you have an article recently published please email the citation for inclusion in the Recent Bear Literature. The deadlines for the next issues are:

- Spring Issue: 5 February Agnieszka Sergiel: a.sergiel@biol.uni.wroc.pl
- Summer Issue: 5 June: Agnes Pelletier: asg.pelletier@gmail.com
- Fall Issue: 5 October: Marion Schneider: mfschneider@gmx.de

For easy access to articles, we are now including the DOI citation and corresponding author email address, if available. To open articles from their DOI, either click on the hyperlink within the citation or enter the DOI citation in the text box provided at the following website: http://dx.doi.org


Barker, O. E., A. E. Derocher, and M. A. Edwards. 2014. Use of Arctic ground squirrels (Urocitellus parryii) by brown bears (Ursus


Krey, A., S. K. Ostertag, and H. M. Chan. 2014. Assessment of neurotoxic effects of mercury in beluga whales (Delphinapterus leucas), ringed seals (Pusa hispida), and polar bears (Ursus maritimus) from the Canadian Arctic. Science of The Total Environment. doi: 10.1016/j.scitotenv.2014.05.134. krey@unbc.ca.


Liu, S. et al. 2014. Population genomics reveal recent speciation and rapid evolutionary adaptation in polar bears. Cell 157: 785-794. doi: 10.1016/j.cell.2014.03.054. rasmus_nielsen@berkeley.edu / ewillerslev@smn.ku.dk / wangj@genomics.org.cn.


Satellite Imagery as a Tool to Track Arctic Wildlife. PLoS ONE 9: e101513. doi: 10.1371/journal.pone.0101513. stapl078@umn.edu.


Wei, F., Y. Hu, L. Yan, Y. Nie, Q. Wu, and Z. Zhang. 2014. Giant pandas are not an evolutionary cul-de-sac: Evidence from multidisciplinary research. Molecular Biology and Evolution: msu278. doi: 10.1093/molbev/msu278. weifw@ioz.ac.cn.


IBA Officers & Council

Executive Council Members
Karen Noyce
President
15542 D County Road 72
Warba, MN 55793 USA
Phone: 1-218-259-6686
Email: karen.v.noyce@gmail.com

Frank van Manen
Past-President
Interagency Grizzly Bear Study Team
U.S. Geological Survey
Northern Rocky Mountain Science Center
2327 University Way, Suite 2
Bozeman, MT 59715 USA
Phone: 1-406-994-5043
Email: vanmanen@utk.edu

Mike Proctor
Vice President for Americas
Birchdale Ecological
PO Box 920
Kaslo, BC, V0G 1M0 Canada
Phone: 1-250-353-7339
Email: mproctor@netidea.com

Andreas Zedrosser
Vice President for Eurasia
Norwegian University of Life Sciences
Pb. 5003, N - 1432, Ås, Norway
Phone: +47-6496-5393
Fax: +47-6496-5801
Email: andreas.zedrosser@hit.no

Jennapher Teunissen van Manen
Secretary
Bozeman, MT USA
Phone: 1-406-600-3397
Email: jennapher.teunissenvanmanen@outlook.com

Tabitha Graves
Treasurer
1127 4th Avenue West
Columbia Falls, MT 59912 USA
Phone: 1-406-396-4162
Email: tabgra@yahoo.com

Emre Can
Council Member
Wildlife Conservation Research Unit
University of Oxford
Recanati-Kaplan Centre, Tubney House
Abingdon Road, Tubney, Abingdon
OX13 5QL, UK
Phone: +44 (0) 1865 611 100
Email: emre.can@zoo.ox.ac.uk

Nishith Dharaiya
Council Member
Department of Life Sciences
HNG University
Patan, Gujarat, India
Phone: +91 999 898 1560
Email: nadharaiya@gmail.com

Gabriella Fredriksson
Council Member
Jl. Wahid Hasyim 51/74
20154 Medan, North Sumatra, Indonesia
Email: gabriella.fredriksson@gmail.com

Marty Obbard
Council Member
Ontario Ministry of Natural Resources
DNA Building, Trent University
2140 East Bank Drive
Peterborough, ON K9J 7B8 Canada
Phone: 1-705-755-1549
Email: martyn.obbard@ontario.ca

Gordon Stenhouse
Council Member
Research Scientist and Grizzly Bear Program Lead
Foothills Research Institute
1176 Switzer Drive, Box 6330
Hinton, AB, T7V 1L6 Canada
Phone: 1-780-865-8388
Email: gstenhouse@foothillsri.ca

Ximena Velez-Liendo
Council Member
Centro de Biodiversidad y Genetica
Universidad Mayor de San Simon
PO. Box 538, Cochabamba, Bolivia
Phone: + 591 4 4540706
Email: x.velezliendo@gmail.com

Ex-Officio Members
Jerry Belant
Ursus Editor
Carnivore Ecology Laboratory
Forest and Wildlife Research Center
Mississippi State University
Box 9690
Mississippi State, MS 39762 USA
Phone: 1-662-325-2996
Email: jbelant@cfr.msstate.edu

Julia Bevins
Chair - Bear Conservation Fund
3303 Checkmate Dr.
Anchorage AK 99508 USA
Phone: 1-907-223-3483
Email: juliebevins@hotmail.com

Diana Doan-Crider
Webmaster & Student Affairs Coordinator
Department of Ecosystem Science & Management
Texas A&M University
Field Office:
PO Box 185
Comfort, TX 78013-0185 USA
Phone: 1-830-324-6550
Email: d-crider@tamu.edu

Dave Garshelis
IUCN Bear Specialist Group Co-chair
Minnesota Department of Natural Resources
1201 East Highway 2
Grand Rapids, MN 55744 USA
Phone: 1-218-327-4146
Email: dave.garshelis@dnr.state.mn.us

Mark A. Edwards, Ph.D.
IBN Newsletter Editor
Royal Alberta Museum
12845 - 102 Ave.
Edmonton, AB
T5N 0M6 Canada
Phone: 1-780-453-9125
Email: mark.edwards@gov.ab.ca

Rob Steinmetz
IUCN Bear Specialist Group Co-chair
WWF-Thailand
2549/45 Paholyothin Rd.
Ladyao, Watthana, Bangkok, 10900 Thailand
Phone: +662-942-7691
Email: robty@hotmail.com

Dag Vongraven
IUCN Polar Bear Specialist Group
Norwegian Polar Institute
FRAM Center
N-9296 Tromso, Norway
Phone: +47 77750638
Email: dag.vongraven@npolar.no

2Term expires in 2014
BSG Expert Team Chairs

BSG Co-chairs
Dave Garshelis
dave.garshelis@state.mn.us
Rob Steinmetz
robtyn@hotmail.com

Red List Authority Focal Point
Bruce McLellan
bruce.mclellan@gov.bc.ca

European Brown Bear Expert Team Co-chairs
Djuro Huber
huber@vef.hr
Jon Swenson
jon.swenson@nmbu.no

North Asian Brown Bear Expert Team Co-chairs
Larry Van Daele
larry.vandaele@alaska.gov
Tsutomu Mano
mano@hro.or.jp

South Asian Brown Bear Expert Team Co-chairs
Achyut Aryal
savefauna@gmail.com
Ali Nawaz
nawazma@gmail.com

Asiatic Black Bear Expert Team Co-chairs
Dave Garshelis
dave.garshelis@state.mn.us
S. Sathyakumar
ssk@wii.gov.in

Sun Bear Expert Team Co-chairs
Gabriella Fredriksson
gabriella.fredriksson@gmail.com
Lorraine Scotson
scotsonuk@gmail.com

Sloth Bear Expert Team Co-chairs
Harendra Bargali
bearconservation@gmail.com
Nishith Dharaiya
nadharaiya@gmail.com

Giant Panda Expert Team Co-chairs
Ron Swaisgood
rswaisgood@sandiegozoo.org
Dajun Wang
djwang@pku.edu.cn

Andean Bear Expert Team Co-chairs
Shenandoha Garcia-Rangel
bioshaena@gmail.com
Ximena Velez-Liendo
x.velezliendo@gmail.com

Trade in Bear Parts Expert Team Chair
Chris Shepherd
chris.shepherd@traffic.org

Captive Bears Expert Team Co-chairs
Matt Hunt
asianbears@gmail.com
Lydia Kolter
kolter@koelnerzoo.de

Human-Bear Conflicts Expert Team Co-chairs
John Beecham
john.beecham@gmail.com
Lana Ciarniello
aklak@telus.net

Mexican Black Bear Expert Team Chair
Diana Crider
diana.crider@gmail.com

Technical and Scientific Advisors
Bruce McLellan
bruce.mclellan@gov.bc.ca
Michael Proctor
mproctor@netidea.com
John Seidensticker
seidenstickerj@si.edu
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 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.