



PATHWAYS TO PROGRESS



6TH INTERNATIONAL
**Human-Bear
Conflicts**
WORKSHOP

October 16-20, 2022 in Lake Tahoe, Nevada

HumanBearConflicts.org



Connecting People, Conserving Bears

2022 Organizing Committee

Carl Lackey, Nevada Dept. of Wildlife, Co-Chair

Jeremy Hurst, New York State Dept. of Environmental Conservation, Co-Chair

Linda Masterson, *Living with Bears Handbook*, Co-Chair & Program Co-Chair

Rich Beausoleil, Washington Dept. of Fish & Wildlife, Program Co-Chair

Lisa Philippen, Appalachian Bear Rescue, Business & Event Director

Stewart Breck, USDA National Wildlife Research Center

Dana Dodd, Appalachian Bear Rescue

Sara Holm, California Dept. of Fish and Wildlife

David Kocka, Virginia Dept. of Wildlife Resources

Ramona Maraj, Parks Canada

Joe Northrup, Ontario Ministry of Natural Resources and Forestry

Brian Wakeling, Montana Fish, Wildlife & Parks

Geoff York, Polar Bears International



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DAILY ACTIVITIES

Registration and Information Desk

Sunday 12:00 – 5:00 pm

Monday - Wednesday
7:30 – 10:30 am
and during breaks

Breaks

morning 10:00 – 10:20 am

lunch 12:00 – 1:30 pm (*on your own*)

afternoon 3:00 – 3:20 pm

Sessions

Sand Harbor I & II

Monday - Wednesday
8:00 am – 12:00 pm
1:30 pm – 5:00 pm

Thursday

8:00 am – 12:30 pm

Silent Auction & Night Life

Silent Auction: View items and place bids in Sand Harbor I & II. Bidding closes 7:00 pm at Wednesday evening social and winners announced; must be present to win.

Sunday: 6:30 pm - Welcome Social in the South Shore room. Refreshments and entertainment by Tahoe's own local author, historian, forester and storyteller Don Lane.

Monday: 6:30 pm - Poster Session and Catered Evening Social in Sand Harbor III.

Tuesday: No scheduled evening activities so you can get together with colleagues or explore Lake Tahoe.

Wednesday: 6:00 pm - Evening Social with hearty appetizers and Pneu-Dart drawing (must be present to win). Silent auction closes. *Location at Harrah's to be announced.*

Hospitality Suite

Monday – Thursday, 8:00 am – 8:00 pm in the Summit Room,
a comfortable, two-level area with several areas for quiet conversations.
Cash non-alcoholic beverages available. No reservation necessary.





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WELCOME...

To the 6th International Human-Bear Conflicts Workshop

From its humble beginnings back in 1987 in the Northwest Territories, when a small and dedicated group of bear managers, educators and wildlife specialists got together to share information and best practices, the workshop has grown and evolved into an international gathering that attracts people from many fields who are all interested in better understanding, resolving and preventing human conflicts with bears.

The 2022 Organizing Committee and everyone who has worked so hard to make this workshop a success is very happy to welcome you to Lake Tahoe. We encourage you to make the most of this unique opportunity to share ideas, explore solutions, expand your network and participate in all the spirited discussions that lead to real forward progress.

It's been too long since we've been able to get together in person. Here's to exploring many *Pathways to Progress* and heading home with the ideas and tools you need.

PATHWAYS TO PROGRESS

Connecting People, Conserving Bears

October 16 - 20, 2022
Lake Tahoe, Nevada
HumanBearConflicts.org

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AGENDA

SUNDAY

- Noon **Registration desk** open Sunday noon to 5:00 pm, daily 7:30 - 10:30 am, and during breaks
- 6:30 pm **Welcome Social** in the South Shore Room; refreshments and entertainment by Tahoe's own local author, historian, forester and storyteller Don Lane

MONDAY

- 8:00 am **Welcome/Housekeeping** Carl Lackey, Nevada Dept. of Wildlife; International Association of Bear Research and Management, Co-chair, Management Committee
- Director's Welcome** Tony Wasley, Nevada Dept. of Wildlife; President, Association of Fish and Wildlife Agencies
- Keynote Speaker Introduction** Rich Beausoleil, Washington Dept. of Fish & Wildlife; IUCN Bear Specialist Group - Co-chair, North American Bears Expert Team
- Keynote Address: The Evolution of Human-Bear Conflicts in North America** by Chris Servheen, U.S. Fish & Wildlife Service Grizzly Bear Recovery Coordinator (retired); IUCN Bear Specialist Group - Co-chair, North American Bears Expert Team
- The International Human-Bear Conflicts Workshops: A Retrospective** by Dick Shideler, Aklaq Services; Alaska Department of Fish and Game (retired)
- 10:00 am *20-minute Break*
- 10:20 am **PATHWAYS TO PROGRESS**
1. **The Challenges of Providing Correct, Consistent Bear Safety Messaging** by John Hechtel, President, International Association of Bear Research and Management
 2. **Using the Social Science Toolbox to Evaluate Education Strategies for Coexistence** by Ramona Maraj, Parks Canada
 3. **What Can \$1 Million Do? Unique Community Grant Opportunity in Colorado** by Kristin Cannon, Colorado Parks and Wildlife
 4. **Climate, Conflict and Coexistence: Identifying and Addressing the Drivers of Human-Polar Bear Interaction in Southern Hudson Bay** by Joseph Northrup, Ontario Ministry Natural Resources and Forestry; IUCN Bear Specialist Group – Member, North American Bears Expert Team
 5. **Community Outreach and Bear Safety Education Programs as a Tool to Mitigate Human-Sloth Bear Conflicts in Western India** by Nishith Dharaiya, Wildlife and Conservation Biology Research Lab, Department of Life Sciences, Hemchandracharya North Gujarat University, Patan (Gujarat) India
- Noon *Lunch on your own; visit vendors*

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Monday continued...

- 1:30 pm **PANEL DISCUSSION: How the BearWise® Program Builds Bridges, Promotes Partnerships and Creates Communities** Dan Gibbs, Tennessee Wildlife Resources Agency; Linda Masterson and LaVonne Ewing, BearWise Program; Bill Stiver, Great Smoky Mountains National Park; Ashley Hobbs, North Carolina Wildlife Resources Commission
- 3:00 pm *20-minute Break*
- 3:20 pm **CONNECTING PEOPLE & EMPOWERING COMMUNITIES**
6. **Do Community Groups Have a Role in Reducing Human-Bear Conflict?**
by Brenda Lee, Colorado Bear Coalition
 7. **Grizzly Bear Coexistence Solutions** by Gillian Sanders, Grizzly Bear Coexistence Solutions
 8. **Successes and Challenges of the Mountain View BearSmart Community Program in Alberta: Current and Future Outlook** by Paul Fraser, Barr Engineering and Environmental Science Canada; Mountain View BearSmart Society
 9. **Human-Bear Coexistence in Slovakia** by Michael Haring, State Nature Conservancy Slovakia, Bear Intervention Team
 10. **Cohabitation in the Arctic: Human-Bear Best Practices in an Alaska Oilfield**
by Christina Pohl and Wendy Mahan, ConocoPhillips Alaska, Inc.
- 5:00 pm *Adjourn*
- 6:30 pm **Poster Session and Catered Evening Social**

TUESDAY

- 8:00 am **FEATURED SPEAKER** Joe Savikataaq, Jr., Conservation Officer and Mayor of Arviat, Nunavut, Hudson Bay: **Balancing the Needs of People and Polar Bears: Challenges of the Arctic**
- TOOLS & TACTICS**
11. **An Analysis of Human-Bear Conflict in North America: 1880 to 2020**
by Cody Miller, Brigham Young University
 12. **Bearenheit 451: Evaluating the Role of Harvest to Stabilize or Reduce Crop Damage Conflicts** by Andrew Tri, Minnesota Dept. of Natural Resources
 13. **Experimental Test of the Efficacy of Hunting for Controlling Human-Wildlife Conflict** by Joseph Northrup, Ontario Ministry of Natural Resources and Forestry; IUCN Bear Specialist Group – Member, North American Bears Expert Team
- 10:00 am *20-minute Break*

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Tuesday continued...

- 10:20 am 14. **A 20-Year Retrospective of Aversive Conditioning of Grizzly Bears in Kananaskis Country, Alberta, Canada** by John Paczkowski, Alberta Environment and Parks
15. **Aversive Conditioning of Grizzly Bears in Kananaskis Country, Alberta, Canada** by Claire Edwards, University of Alberta
16. **Looking to Visitors and Experts to Inform Management of Roadside Bear Viewing in Peter Lougheed Provincial Park, Alberta** by Annie Pumphrey, University of Northern British Columbia
17. **Benefits of Developing and Implementing an Agency Policy to Manage Human-Bear Conflicts** by Janelle Musser, Tennessee Wildlife Resources Agency
18. **Is a Bite Worse Than a Bark? The Best-Use Method of Karelian Bear Dogs in Hazing of Black Bears in Nevada** by Heather Reich, Nevada Department of Wildlife
- Noon *Lunch on your own; visit vendors*
- 1:30 pm **TOOLS & TACTICS**
19. **Lessons Learned: Thirty Years of Human-Bear Conflict Mitigation** by Jay Honeyman, Alberta Ministry of Environment and Parks (retired)
- PANEL DISCUSSION: **Overcoming Barriers to Electric Fence Use for Mitigating Bear Attractants** Jay Honeyman; Jeff Marley, Margo Supplies; Gillian Sanders, Grizzly Bear Coexistence Solutions; Russ Talmo, Defenders of Wildlife
- 3:00 pm *20-minute Break*
- 3:20 pm 20. **Follow-Up Evaluation on the Effectiveness of a Large-Scale Effort to Use Bear-Resistant Garbage Cans for Limiting Conflict in Durango, Colorado** by Cassandre Venumière-Lefebvre, Colorado State University
21. **“Fence the Chickens and Lock Up the Trash” Reducing Human-Bear Conflict in Small Bites Through a Conflict Mitigation Loaner Program** by Chiarastella Feder
22. **Human-Bear Conflict “Hot Spots,” Conflict-Reduction Infrastructure Needs and Information, Education and Outreach Mapped in the Bitterroot Valley of Montana** by Jessica Reyes, Wind River Bear Institute
23. **Numerical Model Approaches to Assess and Manage Human Injury Risk by Asiatic Black Bears** by Takashi Machimura, Osaka University, Japan
24. **New Interagency Map Promotes Bear-Human Safety on the Kenai and Russian Rivers, Alaska** by Marion Glaser, AK US Forest Service
- 5:00 pm *Adjourn – Evening on Your Own*

continued...

WEDNESDAY

- 8:00 am FEATURED SPEAKER Dr. Diana Doan-Crider, Director, Animo Partnership in Natural Resources: **Conserving Bears Through Local Knowledge: Don't Throw the Baby Out with the Bathwater**
- 9:00 am **PATHWAYS TO COEXISTENCE: UNDERSTANDING PEOPLE**
25. **Reducing Livestock-Grizzly Conflict: Uncovering the Symbolic Meanings of Conflict** by Allegra Sundstrom, Idaho State University
26. **Grizzly Bear Impacts on Rural Well-Being in Montana and Idaho** by Morey Burnham, Idaho State University
27. **Advancing Sloth Bear Habitat Management to Mitigate Human-Sloth Bear Conflicts in Western India** by Arzoo Malik, The Maharaja Sayajirao University of Baroda, Navrachana University, Vadodara, Wildlife and Conservation Biology Research Lab
- 10:00 am *20-minute Break*
- 10:20 am 28. **The Evolution of the World's Most Dangerous Bear: How it Can Inform Messaging in Sloth Bear Country** by Thomas Sharp, Wildlife SOS
29. **Beyond Perception: Dread Among Locals Towards Sloth Bears on Prevalent Human-Sloth Bear Conflicts** by Shalu Mesaria, Wildlife & Conservation Biology Research Institute, Patan, Gujarat, India
- 11:00 am FEATURED SPEAKER Dr. Katherine McComas, Cornell University: **Influencing Human Behavior Towards Bears Through Risk Communication**
- Noon *Lunch on your own; visit vendors*
- EFFECTIVE MESSAGING AND OUTREACH**
- 1:30 pm PANEL DISCUSSION: **Changing the Channel on Bad News Bears: Communications and Media Tips** Clive Desire-Tésar, Clive Tesar Consulting; Mark Hart, Arizona Game and Fish Department; Peter Tira, California Department of Wildlife; Amy Alonzo, *Reno-Gazette Journal*; Ryan Canaday, KTVN Reno Channel 2 (CBS)
- 3:00 pm *20-minute Break*
- 3:20 pm 30. **Social Media, an Economic Enabler for Proactive Education and Outreach** by Gerald Hodge, Appalachia Georgia Friends of the Bears
31. **Community Ambassadors for Collective Action: Opportunities to Scale Up Behavior Change to Reduce Human-Bear Conflict** by Megan Jones, U.S. Geological Survey, Oregon Cooperative Fish and Wildlife Research Unit, Oregon State University
32. **Assessing the Future of Coexistence with Grizzly Bears Around the Beaverhead-Deerlodge National Forest Using Photovoice** by Marley Held, Idaho State University
33. **Using Reporting Trends to Develop More Effective Human-Bear Coexistence Messaging** by Alexander Heeren, California Department of Fish and Wildlife

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Wednesday continued...

34. **Approaches to Communicate and Evaluate Learning About Safety Around Wildlife** by Jill Bueddefeld, Wilfrid Laurier University; Ramona Maraj, Parks Canada

5:00 pm *Adjourn*

6:00 pm **Catered Evening Social, Silent Auction, Pneu-Dart Drawing**

THURSDAY

8:00 am **FEATURED SPEAKER Seth Wilson, Blackfoot Challenge: Learning to Live with Grizzlies: A 20-Year Case Study in the Blackfoot Watershed of Western Montana**

PERSPECTIVES ON PROGRESS

35. **South Lake Tahoe Black Bears and Creating a Positive Path Forward for Both** by Toogee Seilsch, Lake Tahoe, Nevada

36. **The Encouraging Story of How Maroon Bells-Snowmass Wilderness went from Bear Crisis to Backcountry Cohabitation** by Katy Nelson, US Forest Service

37. **Legislative Perspectives and a BearSmart Wildlife Attractant Bylaw/ Ordinance Tool Kit** by Rich Beausoleil, Washington Dept. of Fish & Wildlife; IUCN Bear Specialist Group – Co-chair, North American Bears Expert Team; Sylvia Dolson, Get Bear Smart Society

10:00 am *20-minute Break*

10:20 am **PANEL DISCUSSION: Engaging Communities in Human-Bear Coexistence Research** Sara Elmeli, Sarah E Consulting; Courtney Hughes, Alberta Environment and Parks; Annie Pumphrey, University of Northern British Columbia; Allegra Sundstrom, Idaho State University

11:30 am **WHERE DO WE GO FROM HERE?**
An interactive session with attendees to discuss key takeaways and pathways to progress that will focus on:

- Consistent Messaging
- New Terminology
- Defining Conflict
- Moving from Conflict to Coexistence

Exit Survey

Next Workshop

12:30 pm *Workshop Formally Adjourns*

1:30 pm *Committee/Working Group Meetings*

BEARS OF THE WORLD



American Black Bear
Ursus americanus



Grizzly / Brown Bear
Ursus arctos



Polar Bear
Ursus maritimus



Asiatic Black Bear
Ursus thibetanus



Spectacled Bear
Tremarctos ornatus



Sun Bear
Helarctos malayanus



Sloth Bear
Melursus ursinus



Giant Panda
Ailuropoda melanoleuca

Illustrations courtesy of Evelyn Kirkaldy (evelynkirkaldyart.com)

POSTER SESSION PREVIEW

You won't want to miss the **Poster Session and Catered Social on Monday night at 6:30 pm in Sand Harbor III**. The room will be set to make it easy to munch, mingle and talk to the presenters and co-authors about their work. Subjects are wide-ranging and discussion is sure to be lively. Full Abstracts follow this overview.

1. **Detection of Polar Bear Dens in Alaska's North Slope Oilfields**
by Justin Blank, Environmental Research and Consulting, LLC
2. **Big Ideas Come from a Small Group in the Southeastern United States**
by Kristin Botzet, Department of Forestry, Wildlife and Fisheries, University of Tennessee
3. **Coexisting with Wildlife: Black Bear Trends at the YMCA of the Rockies and Attractants in Estes Park**
by Paul Cocomo, Worcester Polytechnic Institute (WPI)
4. **A Review of Approaches Currently Used to Reduce Human-Bear Conflict and Their Applicability to Polar Bears**
by Melissa Galicia, Environment and Climate Change Canada, Canadian Wildlife Service
5. **Modifying Collars Using Surgical Tubing to Allow for Post-Release Weight Fluctuation of Rehabilitated Black Bears**
by Bailey M. Greco, California Department of Fish and Wildlife
6. **Partnerships: Victory Depends on Many Counselors**
by Gerald D. Hodge, Jr., Appalachia Georgia Friends of the Bears, Inc.
7. **Detect and Protect: Efficacy of Compact Surveillance Radar to Detect Polar Bears (*Ursus maritimus*) in Northern Communities**
by BJ Kirschhoffer, Polar Bears International
8. **One of These Ears Is Not Like the Other**
by Amber Kornak, U.S. Fish and Wildlife Services
9. **Can a Large-Scale Electric Fence Prevent Conflict at Liard River Hot Springs?**
by Jared Marley, Margo Supplies
10. **Fines & Enforcement Success Stories and Challenges**
by Lauren Martensen and Tina White, Snowmass Village Police Department, Animal Services
11. **Black Bear Management in Nuevo Leon, México**
by Muzquiz Ortiz, Manuel; Acosta Canales, Edgardo and Herrera Perez, Guillermo, Departamento de Parques y Vida Silvestre de Nuevo Leon

continued...

Poster Session Preview continued...

12. **Development and Testing of Burr-on-Fur Tags for Tracking Male Polar Bears with Applications to Monitoring Conflict Bears**
by Joseph Northrup, Ontario Ministry of Natural Resources and Forestry; IUCN Bear Specialist Group - Member, North American Bears Expert Team
13. **Effects of Environmental Conditions on the Use of Forward Looking Infrared on Bear Den Detection in the Alaska Arctic**
by Nils J. Pedersen, Institute of Arctic Biology, University of Alaska Fairbanks; Wind River Bear Institute
14. **Spatio-Temporal Overlap of Human-Bear Interaction in Central Gujarat and Its Mitigation Strategies**
by Pratik Desai, WCB Research Lab, Department of Life Sciences, HNG University, Patan (Gujarat) India
15. **Prey or Competitor? Exploring the Influence of Cattle Ranching on Andean Bear Occurrence**
by Carmen Julia Quiroga Pacheco, University of Southeastern Norway– Natural History Museum “Alcide d’Orbigny”
16. **Survival and Movements of Orphaned Black Bear Cubs Released Back into the Wild**
by Andrew Tri, Minnesota Department of Natural Resources
17. **Evaluation of Food Habits and Protein Intake of Asiatic Black Bears Appearing Soybean Field in Kazuno City, Akita Prefecture, Japan**
by Sota Watanabe, Morioka City/ Iwate Prefecture/ Japan
18. **Bears Behaving Badly: A Family Tradition?**
by Jillian Adkins, California Department of Fish and Wildlife, Wildlife Forensic Laboratory
19. **Conflicts Between Asiatic Black Bears and Local Communities: Economic Aspects in Gais Valley, Northern Pakistan**
by Ashfaq Ali, Department of Forestry, Range and Wildlife Management, Karakoram International University, Gilgit, Baltistan, Pakistan
20. **Mass Afforestation Program: A Cause of Increased Human-Bear Conflict in Pakistan**
by Fakhar-i-Abbas, Centre for Bioresource Research, Pakistan
21. **Genotyping by Sequencing in Wildlife Forensics: Using Allele Variants to Improve Population Assignment of American Black Bears (*Ursus Americanus*)**
by Joy Gaines, California Department of Fish and Wildlife, Wildlife Forensic Laboratory