

“The Bear Necessities”

*Current and Emerging Field Practices
and Risk Communication Strategies
to Reduce Human-Bear Conflict*

Panelists

Katie Baum Mettenbrink

NOLS



Grant Breidenbach

BearVault



Moderator

Neal Fox, Ph.D.

Sierra STEM



Our Plan for this Session

- Moderated Panel (60 min)
 - Brief Panelist Introductions
 - Risk Communication and Participant Education
 - Field Practices: Food (and “Smellable”) Storage Practices
 - Field Practices: Other Tools and Practices to Reduce Human-Bear Conflict
 - The Future of Human-Bear Conflict
- A Note on Inclusion: Our Expert Video Panelists
- Audience Q&A (25 min)
- Final Thoughts (5 min)

Our Expert Video Panelists



- **Kerry Gunther**
 - Bear Management Biologist & Bear Program Leader (Yellowstone National Park)
 - 43 years working with and researching bears and human-bear conflict with the NPS
- **Sabrina Bradford, Ph.D.**
 - Grizzly Bear Expert (Cross-Habitat Consulting)
 - Author of *Grizzly Bear Foods* (field guide for Montana Fish, Wildlife, and Parks)
- **Amber Kornak**
 - Conflict Prevention Specialist (People & Carnivores)
 - Bear attack survivor and bear safety advocate
- **Stacey Halvorsen**
 - National Program Director (Big City Mountaineers)
 - BCM: “provide transformative experiences ... for youth from disinvested communities”

Action Items

1. Ensure that your current food (etc) storage practices conform to relevant local regulations on the lands in which you operate.
2. Conduct a review of your organization's risk communication and education practices around bear safety.
3. Assess your organization's existing field practices around food (etc) storage and human-bear conflict avoidance.

But first... Congratulations to **CHUNK!**



Kerry Gunther

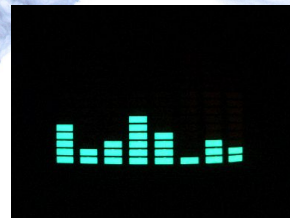
(Yellowstone NP)

Key Data:

“Grizzly bear attacks are extremely rare.”

- Overall: 1 injury per 3.6M park visits
- Frontcountry: 1 injury per 69.7M park visits
- Frontcountry Camping: 1 injury per 29.2M overnight stays
- Backcountry Camping: 1 injury per 1.9M overnight stays

Gunther, K. A., & Atkins, K. M. (2025). Risk of bear-inflicted human injury in Yellowstone National Park. *Ursus*, 2025(36e1), 1-17.



NOLS Bear Encounter Incident Data

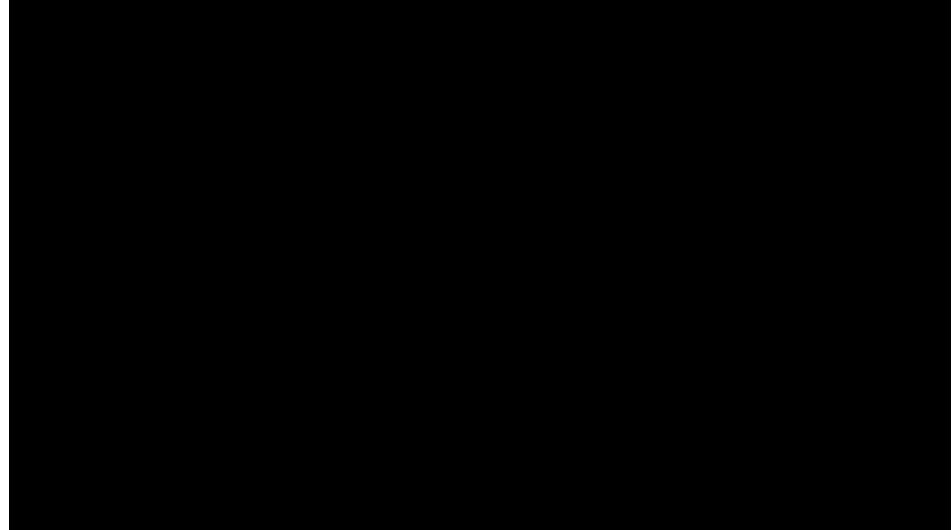
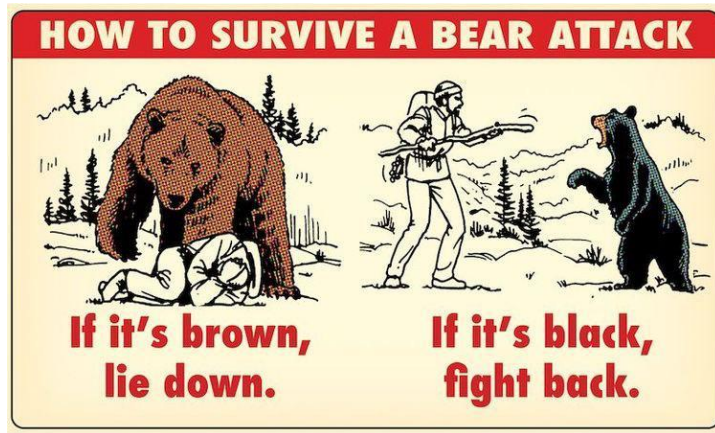
1985-2025

- 4.1 million program days in bear habitat (primarily backcountry locations)
- 128 “close or aggressive” bear encounters
 - 85 black bear
 - 40 grizzly
- 2 injury incidents - 2003 (black bear in Utah), 2011 (grizzly in Alaska)

Sabrina Bradford, Ph.D.

(Cross-Habitat Consulting)

Myth:

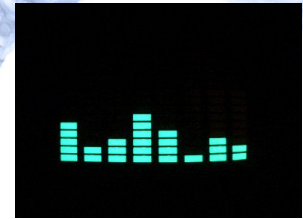


Kerry Gunther

(Yellowstone NP)

Myth:

“That grizzly bear attacks are generally predatory...”



Inclusive Bear Risk Education

1. **Normalize Concern & Assess Prior Knowledge**
2. **Invite Curiosity**
3. Make it Experiential
4. Make it Culturally Relevant
5. Build Shared Responsibility
6. Create Space for Shared Learning



Stacey Halvorsen (Big City Mountaineers)

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NOLS Bear Encounter Drills: Bears on Wheels!



Food (etc) Storage Cheat Sheet



Method	Pros	Cons	Use Case/Context
Hard-Sided Canister	Widely accepted by land managers Very effective if closed properly	Heavy and bulky Limited volume Costly for large groups	Required areas (e.g., Yosemite, Adirondacks); trips with limited trees
Food Storage Locker	Extremely effective No personal equipment needed	Only at designated sites Limited volume: can be full in busy areas	Frontcountry sites; some popular backcountry sites (Yosemite, Canada)
Bear Hang (rope + tree branch)	Low cost Lightweight; no bulk Teaches classic backcountry skills	Need suitable trees Time-consuming to set up Bears can often outsmart poor hangs	Forested areas with good tree cover; low-budget or lightweight trips (where permitted)
Portable Electric Fencing	Volume flexibility Effective deterrent	Heavy(er); expensive Complex to set up Batteries/maintenance They can malfunction	Rafting; basecamp trips; Alaska/Canada; grizzly country; horse-/mule-pack trips

Hard-Sided Bear-Resistant Canisters



Food Storage Locker



Bear Hangs



Stacey Halvorsen (Big City Mountaineers)



HOW TO HANG A BEAR BAG

WITH 6 EASY STEPS

1



1. Find a good tree with a long, strong branch. Choose a tree that is at least 100 ft away from your tent and fire pit.

2



2. Take one rope make a loop in the end. Attach your carabiner through the loop and to to your mesh bag. Fill it with rocks and throw it over the branch.

3



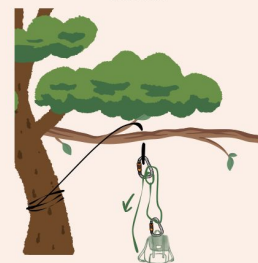
3. Bring bag of rocks down and remove. Make a loop at the end of 2nd rope and clip the loop onto your carabiner too. Then feed the tail end of your second rope through the carabiner to create a sort of lasso.

4



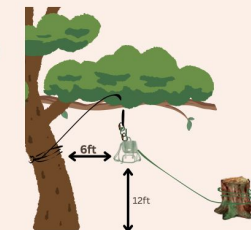
4. Attach a 2nd carabiner through the lasso loop and pull the first rope up until the first carabiner is about 3 feet from the branch. Be sure to hold onto the second carabiner while you lure the first rope up. Tie the first rope off to the tree trunk.

5



5. Attach your food bag to your 2nd carabiner. Then pull the tail end of your 2nd rope to lure the bag up into the air.

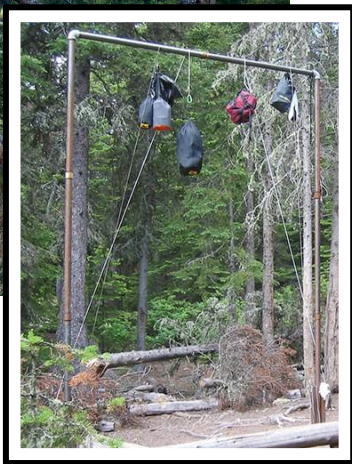
6



6. Be sure your bag is at least 12 feet high and at least 6 ft out from the tree trunk. Tie off your 2nd rope to another nearby tree or stump.



Bear Hangs



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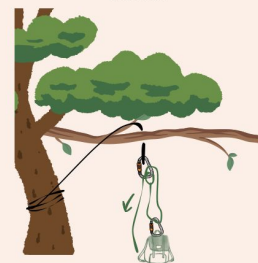
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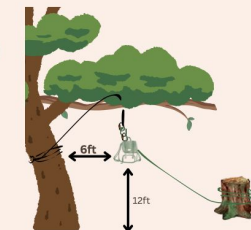
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Portable Electric Fencing



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Kerry Gunther

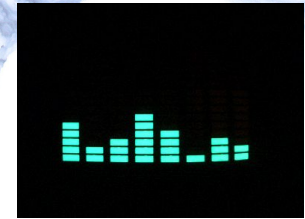
(Yellowstone NP)

Underrated Field Practice (Group Size):

“The larger the party size, the lower the rate of grizzly bear-inflicted human injury.”

- Party of 1 (Solo): 15x risk of party of 3+
- Party of 2: 4x risk of party of 3+
- Party of 3-5: 1 injury per 365K backpackers
- Party of 6+: ZERO injuries in 30-year dataset

Gunther, K. A., & Atkins, K. M. (2025). Friends Matter: Using Party Size to Enhance Safety When Hiking in Grizzly Bear and American Black Bear Habitats. (*In press*).



Sabrina Bradford, Ph.D.

(Cross-Habitat Consulting)

Underrated Field Practice (Human Voice)

Overrated Field Practice: (Bells, Whistles...)

“The human voice is what keeps bears away;
they don’t really want to be around us.”



Amber Kornak

(People & Carnivores)

Underrated Field Practice (Bear Spray):

“Bear spray is my first line of defense.”

- Irrespective of bear species
- Causes little harm, but it has been shown to be effective deterrent
- Effective in other wildlife encounters



NOLS GRIZZLY BEAR PRACTICES

Goals and Tactics

1. AVOID A CLOSE ENCOUNTER

Make frequent and loud bear calls

Place grey water in a river, sump, or ocean

Avoid camping near human and animal trails

Students stay primarily in groups of four or more

Prioritize camps with open site lines

Separate sleeping and cooking areas

Choose kitchens near each other

Pitch tents in close proximity and arrange so as not to trap a bear

As appropriate, use electric fences, bear hangs, or food canisters

2. DETER AN ATTACK

Stay close to other group members

Keep bear spray at hand in every group

Practice bear encounter drills

Have the front traveller carry bear spray

Sleep in tents or tarps

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