
Good Science/Good Policy

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ALTER-Net Summer School 2010

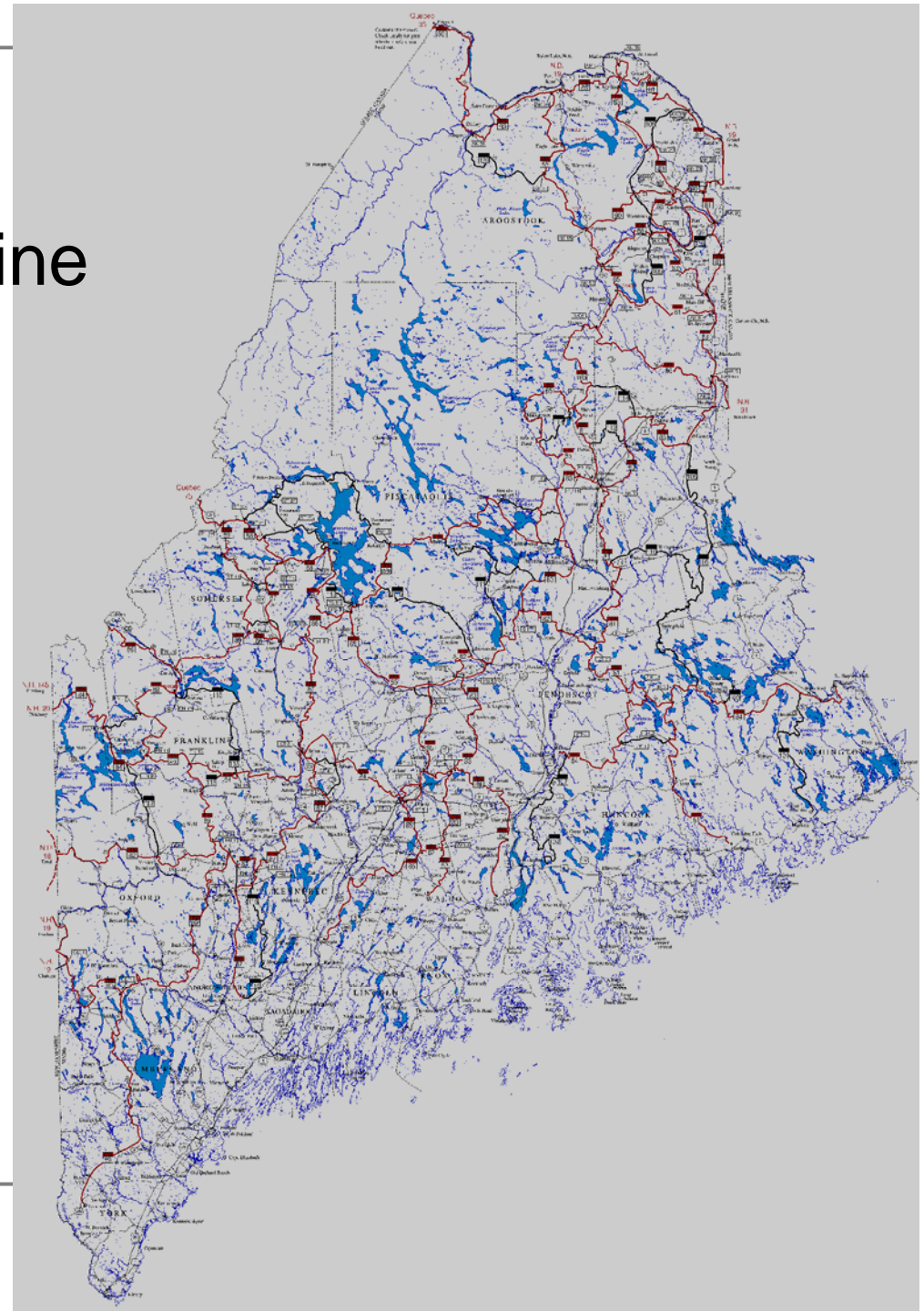


Pro Snowmobile

- ❑ Family activity, enjoy nature
 - ❑ Wilderness experience
 - ❑ “Pay your own way”
 - ❑ “Traditional use”
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Pro Snowmobile

- Snowmobiling in Maine
 - 23,000 km of trails
 - 100,000 registrations
 - 241,000,000 €/year



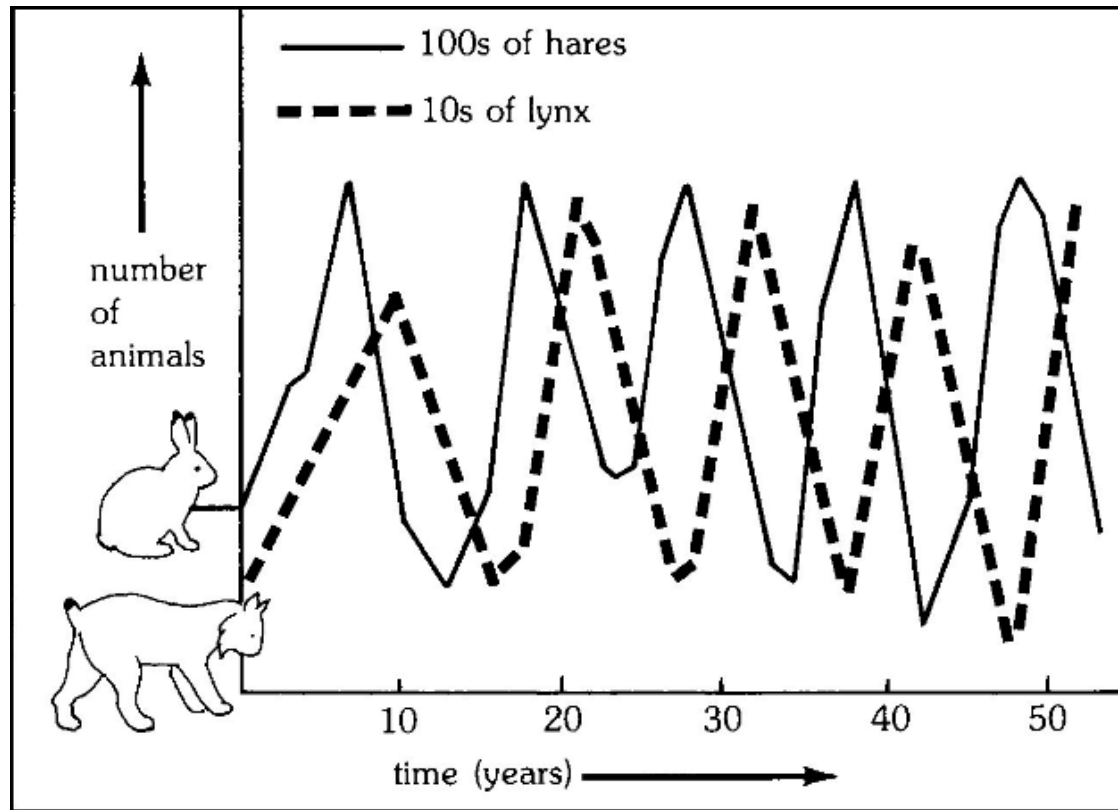
Anti Snowmobile

- Loud, disruptive, smelly
 - Degrade wilderness experience
 - Harass wildlife
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Anti Snowmobile

- Enter habitat that was inaccessible (200 km)
 - Direct harassment: energy costs
 - Indirect harassment: avoiding areas
 - Audible at several km
 - Environmental stressor
 - Indicator of predator
 - Impairs ability to communicate or hear predators
-

Lynx, Hare, and Coyote



Lynx - hare cycle, from an illustration by Tom Parker, courtesy of Cooperative Extension, New York.



The Conflict

- Lynx = endangered species, special protections
 - Areas where lynx live must be managed for lynx habitat
 - Live in areas valued for recreation and timber, important for culture and economy
-

You are the scientist

- What is an impact?
 - How would you measure it?
 - What is your research question?
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Two papers

- **Bunnell**, KD, Flinders, JT, Wolfe, ML. 2006. Potential impacts of coyotes and snowmobiles on lynx conservation in the intermountain west. *Wildlife Society Bulletin* 34(3).
 - **Kolbe**, JA, Squires, JR, Pletscher, DH, Ruggiero, LF. 2007. The effect of snowmobile trails on coyote movements within lynx home ranges. *Journal of Wildlife Management* 71(5).
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Bunnell impact

- Do snowmobile trails facilitate access to potential lynx habitat during periods of deep snow?

Bunnell methods

- Counts of animal tracks from helicopters along snowmobile trails
 - Ground-truthing areas along snowmobile trails to assess use
 - Various environmental variables
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Kolbe impact

- Do coyotes compete with lynx for hares?



Kolbe methods

- Radio-collared coyotes to track movements
 - Analyzed scat to determine coyote diet
 - Various environmental variables
-

Bunnell Results

- “Over 90% of coyote tracks observed in our study areas associated with a snowmobile trail were within 350 m of the trail....Our results suggest that restrictions placed on snowmobiles in lynx conservation areas...because of the potential impacts of coyotes may be appropriate.”
 - Snowmobile trails are bad for lynx
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Kolbe Results

- “Coyotes...did not forage closer to snowmobile trails than random expectation. The overall influence of snowmobile trails on coyote movements and foraging success during winter appeared to be minimal in our study area.”
 - Snowmobile trails have no impact on lynx
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You are the policy maker

- What do you do?
 - Lynx have federal protection
 - Recreation is important to your voters
 - And important to the economy
 - And how do you justify your decision?
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US Fish and Wildlife Service

- "After evaluating Bunnell *et al.* (2006) and Kolbe *et al.* (2007), we determined that the best information available did not indicate that compacted snow routes increase competition from other species to levels that adversely impact lynx populations."

US Fish and Wildlife Service, Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Contiguous United States Distinct Population Segment of the Canada Lynx; Final Rule

US Forest Service

- “Results from this study [Kolbe et al. 2007] have:
 - 1) provided the scientific basis for relaxing restrictions on groomed snowmobile trails as part of lynx conservation standards across millions of acres of federal land;
 - 2) increased understanding of coyote winter ecology relative to lynx management; and
 - 3) provided the scientific template for a second study that is replicating the methods in the dry-snow environment of northwestern Wyoming.”

Some thoughts

- How an impact is defined determines the results
 - One study affected management of millions of hectares
 - Are policy makers being selective about results or careful about defining impact?
 - Can results from one location be applied to other locations?
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Precautionary Principle

- Restricting recreation is the easy answer, but
 - Recreation is culturally important
 - May lose important allies
 - People care about the places they know
 - May actually have (some of) the same goals
 - Broad support is important for long term success
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Sportsmen

for the **WYOMING RANGE**



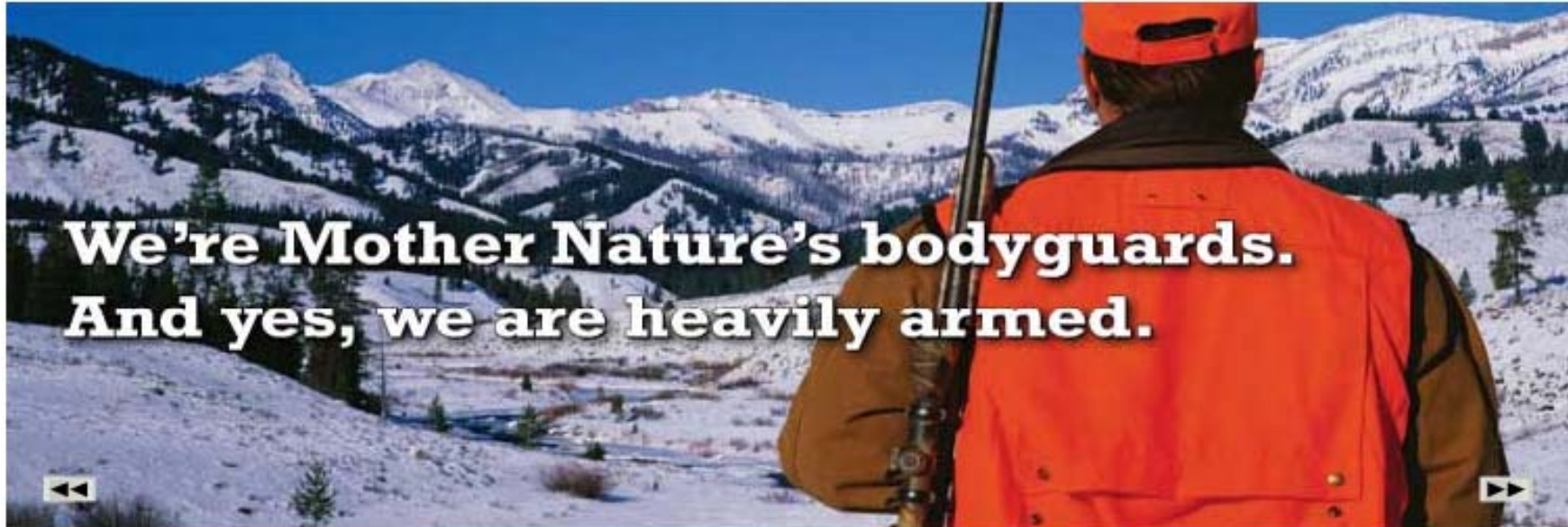
Mother Nature's bodyguards.

e Newsletter:

GO



Senator Barrasso supports
The Wyoming Range



**We're Mother Nature's bodyguards.
And yes, we are heavily armed.**

- Welcome Video
- Home Page
- WHY Defend The WY Range
- The Wyoming Range at Risk
- Spokespersons & Partners
- Sen. Craig Thomas Memorial
- News From The Range

Wyoming Range Alert!

January 15, 2009

The Wyoming Range Legacy act passed out of the Senate today by a vote of 73-21! Both Senator Barrasso and Enzi voted in support of the package. Please contact both of them today and thank them for their vote on behalf of Wyoming's Sportsmen and Women.

The range still needs your help.
Click here to find out how.....

Why
Defend
The Wyoming Range



in memory of
Senator
Craig Thomas
a friend of the WY Range



What
You Can Do



= Home

SUPPORT DU

CONSERVATION

HUNTING

NEWS

MEMBERS

MULTIMEDIA

EVENTS



ROBERT SENGLEIN

BLACK SCOTER

10 Shooting Tips for Waterfowl

by [Wade Bourne](#)

Making a good shot is one of the great joys in waterfowl hunting. Indeed, shooting is the pinnacle of this sport. Everything else - scouting, building blinds, setting decoys, calling, everything - is a lead-up to that moment when you shoulder your gun and fire. Making a clean kill gives you an immediate sense of pride in a job well done.

So, how do you become a good shot? How can you convert misses into hits? What can you do to improve your accuracy and hold your own with more seasoned shooters in the blind or pit?

Good shooting is a mix of coordination, concentration and confidence. Good shooting is more instinctive than mechanical. It's a skill that is honed through adept coaching and lots of practice, similar to other athletic endeavors.

Here's a list of 10 tips for becoming a better shot on ducks and geese. Put these suggestions into practice, and you'll shoot better and enjoy your hunting more.

Tip No. 1: [Make sure your shotgun fits.](#)

Tip No. 2: [Practice shooting in the pre-season.](#)

Tip No. 3: [Don't get in a hurry.](#)



Wade Bourne, Host of DU TV

- + HUNTING HOME
- = MIGRATION MAP
- = WATERFOWL ID GALLERY
- = RETRIEVER TRAINING
- = VIDEO TIPS
- = SHOOTING TIPS
- = DECOY STRATEGIES
- = HUNTING TIPS
- = DUCK CALLING

- ▶ Banding Maps
- ▶ Quizzes & Trivia
- ▶ Seasons & Regulations
- ▶ Weather Forecast
- ▶ Recipes
- ▶ Gearing Up
- ▶ Where to Go
- ▶ Bird Flu FAQ

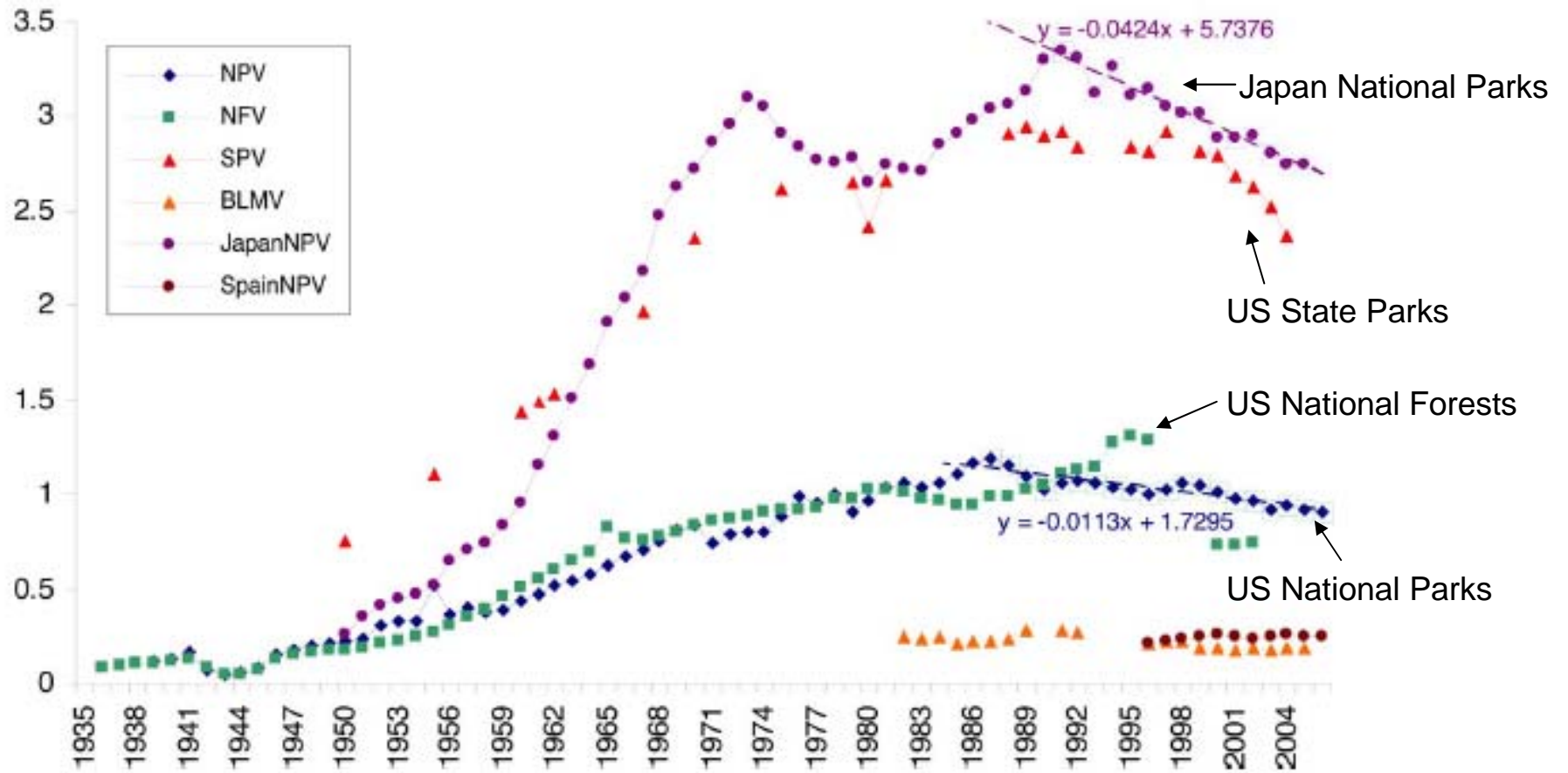
FEATURED

WHEREVER
ADVENTURE
DARES,

THE ARCTIC CAT
PROWLER
IS SURE TO
BE THERE.



World per capita Public Land Visitation





**NO DUMPING
HERE.
DUMP BEHIND
TECHNOLOGY**

