

# Ranching with Wolves

## Experiences from the Northern Rockies

Matt Barnes



Conversation on Wolf Reintroduction in Colorado  
2020 Oct. 21 | Steamboat Creates

# Wolf-livestock conflict

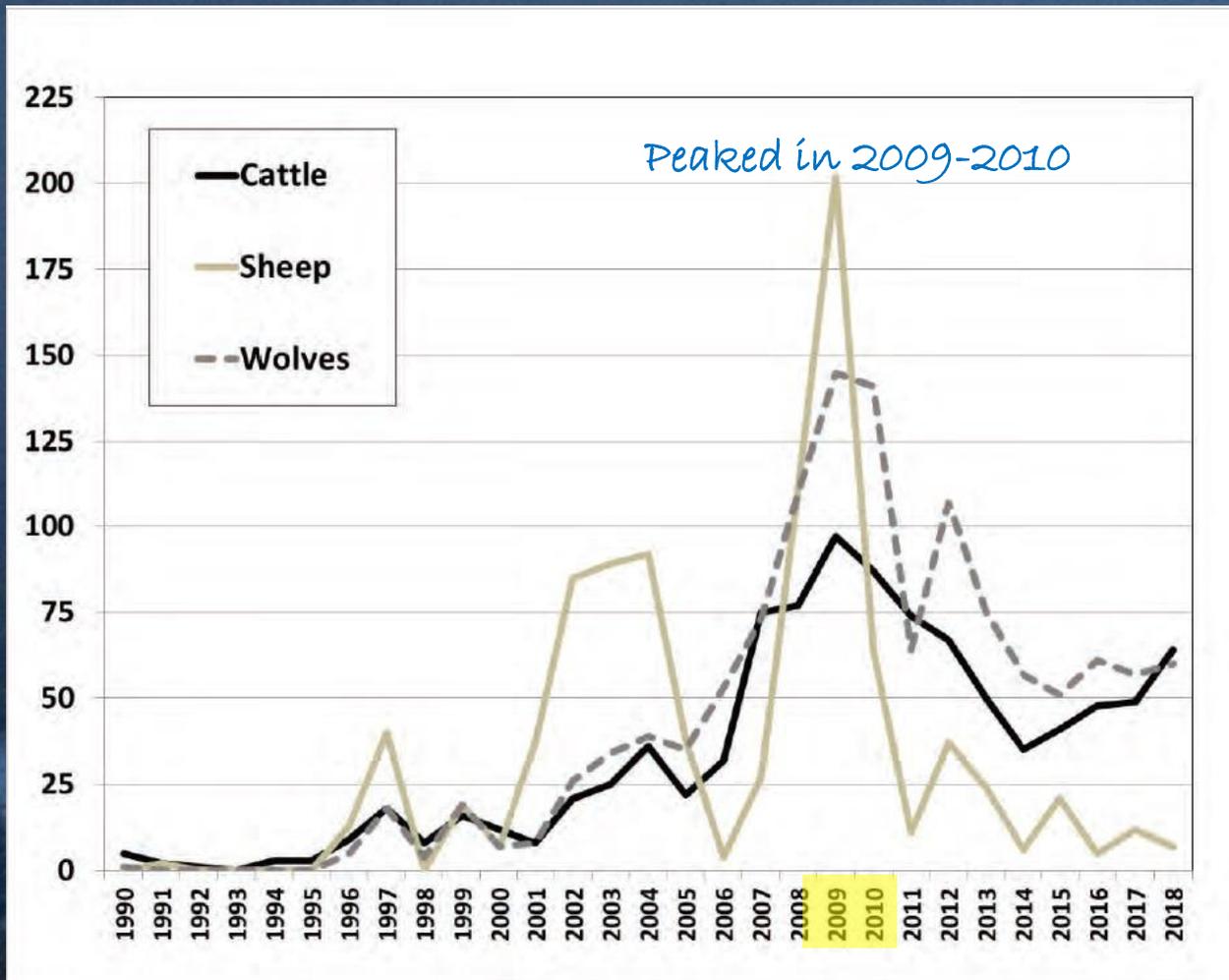
- Wolves sometimes kill livestock, but not often
- Conflicts are localized, can be acute, persistent
- Direct loss
  - Confirmed losses
    - $<0.01\%$  of all cattle, where wolves are present
  - Unconfirmed losses
    - Probably more than confirmed losses
- Indirect losses
  - Weight loss
  - Reduced conception rates
  - Mitigation costs



# Wolf-livestock conflict

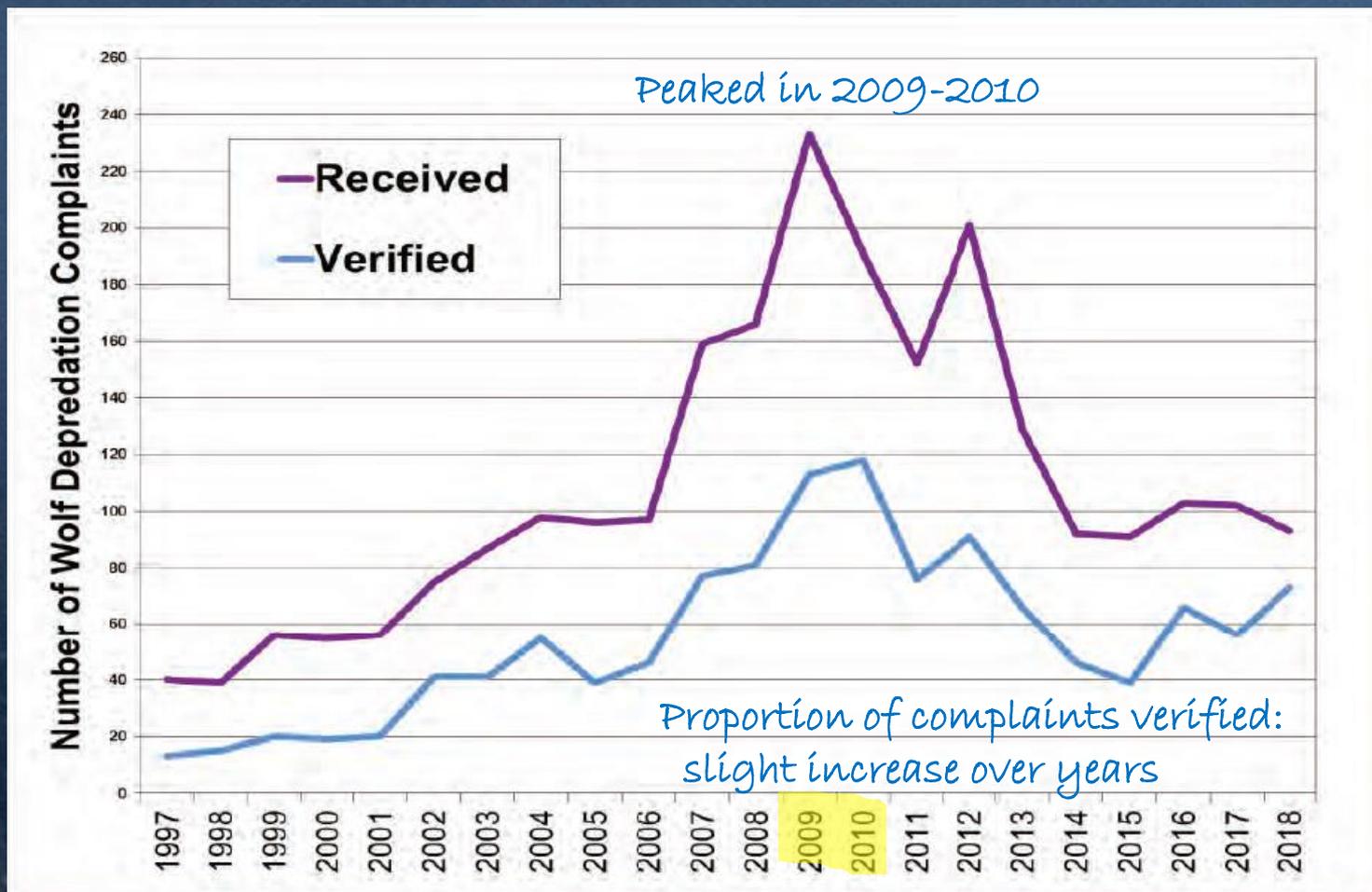
- Northern Rocky Mountains
  - About 1,980,600 cattle
  - Currently about 1,900 – 2,300 wolves
    - One wolf per thousand cattle
- 2015: last year of USFWS data across all states
  - 1,904 wolves
  - 379 confirmed predation losses
    - 161 ID + 134 WY + 62 MT + 13 OR + 7 WA = 379
    - 158 cattle + 218 sheep + 3 horses = 379
    - Mostly cattle in WY, MT, WA; mostly sheep in ID, OR
  - 17% of wolf packs involved in 1+ depredation

# Wolf-livestock conflict: Montana

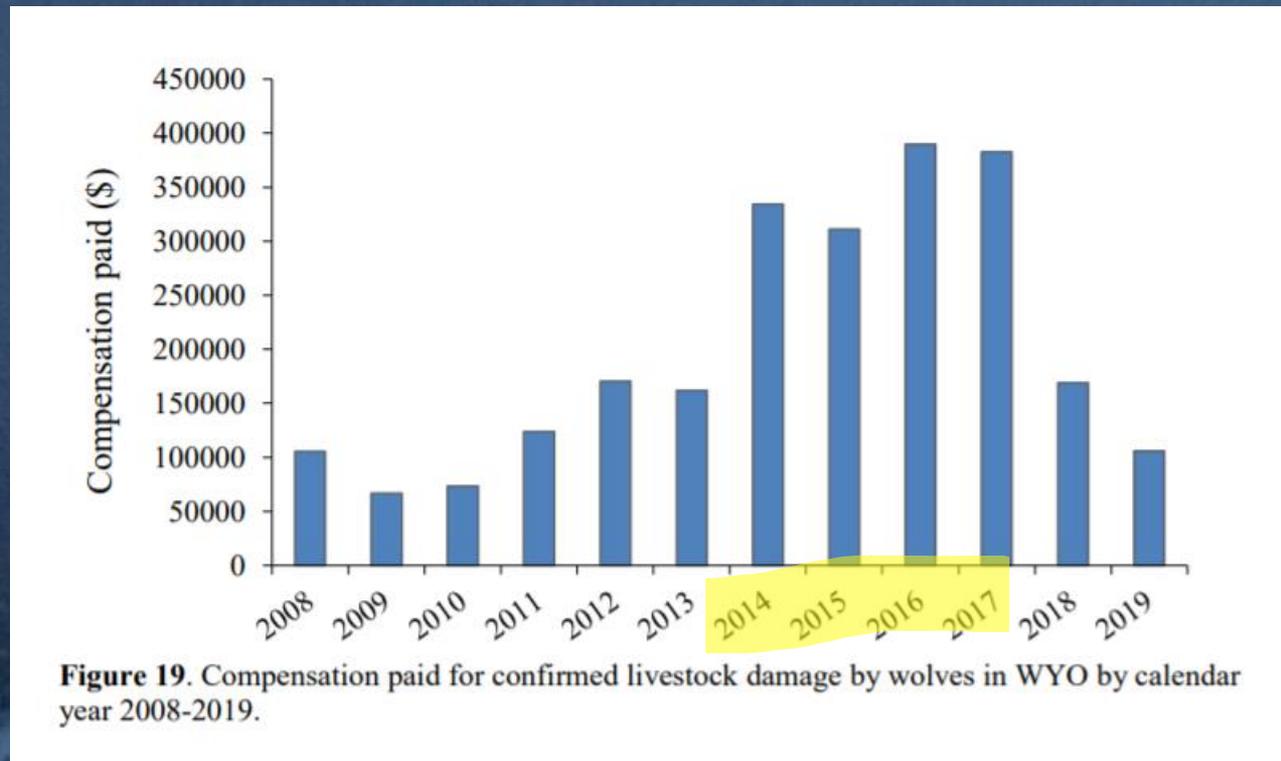


Montana Fish, Wildlife & Parks. 2019.

# Wolf-livestock conflict: Montana



# Wolf-livestock conflict: Wyo.: costs



Wyoming in 2019 paid \$106,183 in compensation (7x value)  
Spent \$23,710 on prevention/management  
Spent just over \$1 million on wolves overall

# Wolf-livestock conflict: costs

Table 4. State and Private compensation spent for wolf damage in the NRM in 2015.

Idaho	46,440.00*	
Montana	68,290.00	
Wyoming	@ 7x 330,667.00 = 66%	\$47,238
Oregon	51,393.00	
Washington	7,200.00*	
Total compensation	503,990.00	\$220,561

\*additional claims are pending.

US FWS 2015 Northern Rocky Mountains wolf report

Wyoming uses a multiplier of 7x value

Wyoming in 2019 paid \$106,183 in compensation

Spent \$23,710 on prevention/management

Spent just over \$1 million on wolves overall



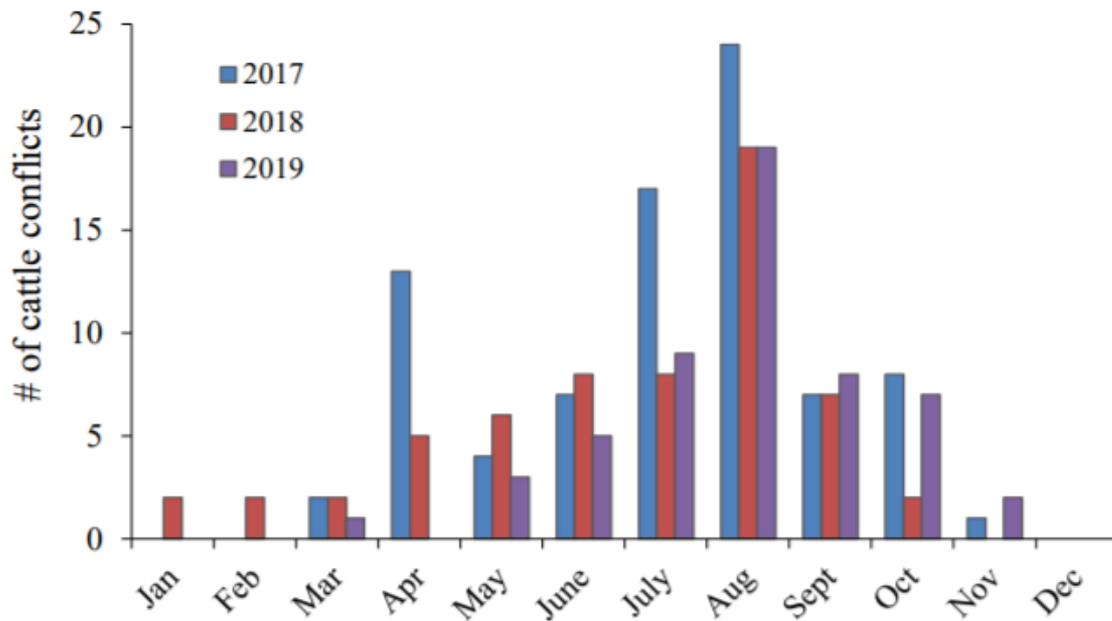


Figure 17. Number of confirmed wolf-cattle conflicts per month in WYO from 2017-2019.

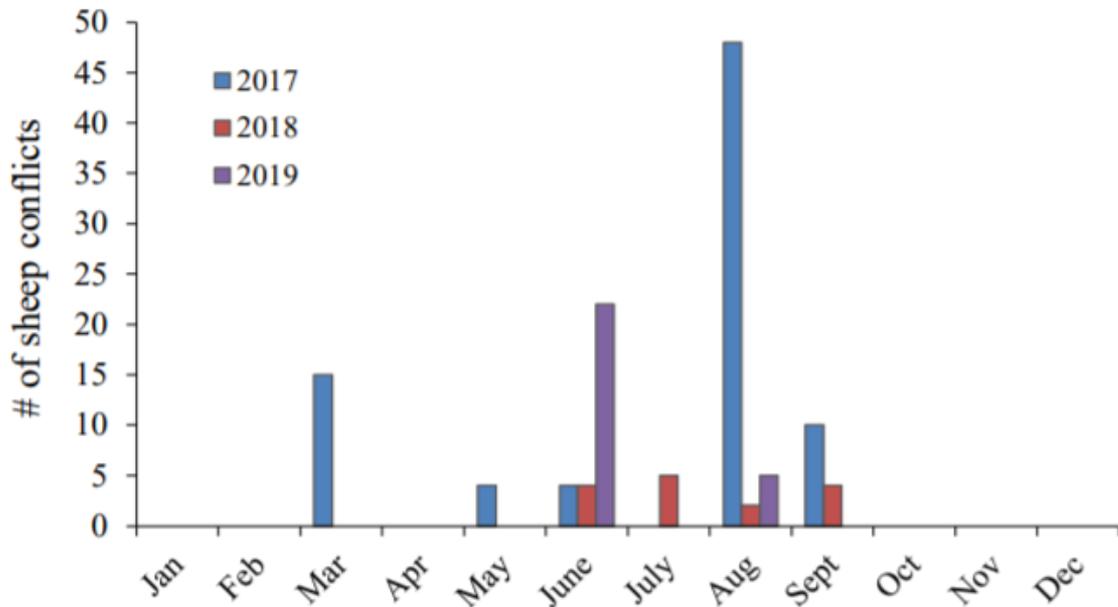


Figure 18. Number of confirmed wolf-sheep conflicts per month in WYO from 2017-2019.

## Seasonal pattern

Most conflicts during summer grazing season (mostly on NFs)

In some years, a minor peak during spring calving/lambing season



# Conflict and coexistence

## Strategies and tools

- Proactive and reactive
- Livestock-focused and predator-focused
- Lethal and non-lethal
- Aversive and disruptive stimuli



# Strategies

*The best “tools” are the ones with brains*

Plan, create, adapt.

- Strategic grazing management
- Stockmanship
  - Low-stress herding
- Livestock guardian dogs
- Carcass removal



# Tools

- Light
  - Foxlights
- Noise
  - Radio Activated Guard (RAG) box
- Non-lethal munitions
- Barriers
  - Physical: fencing
  - Psychological: fladry



# Tools: Light (e.g., Foxlights)



Video: One of multiple Foxlights around a pasture (on barbed-wire fence)

# Tools: fladry, electrified



Steve Primm / NRCC

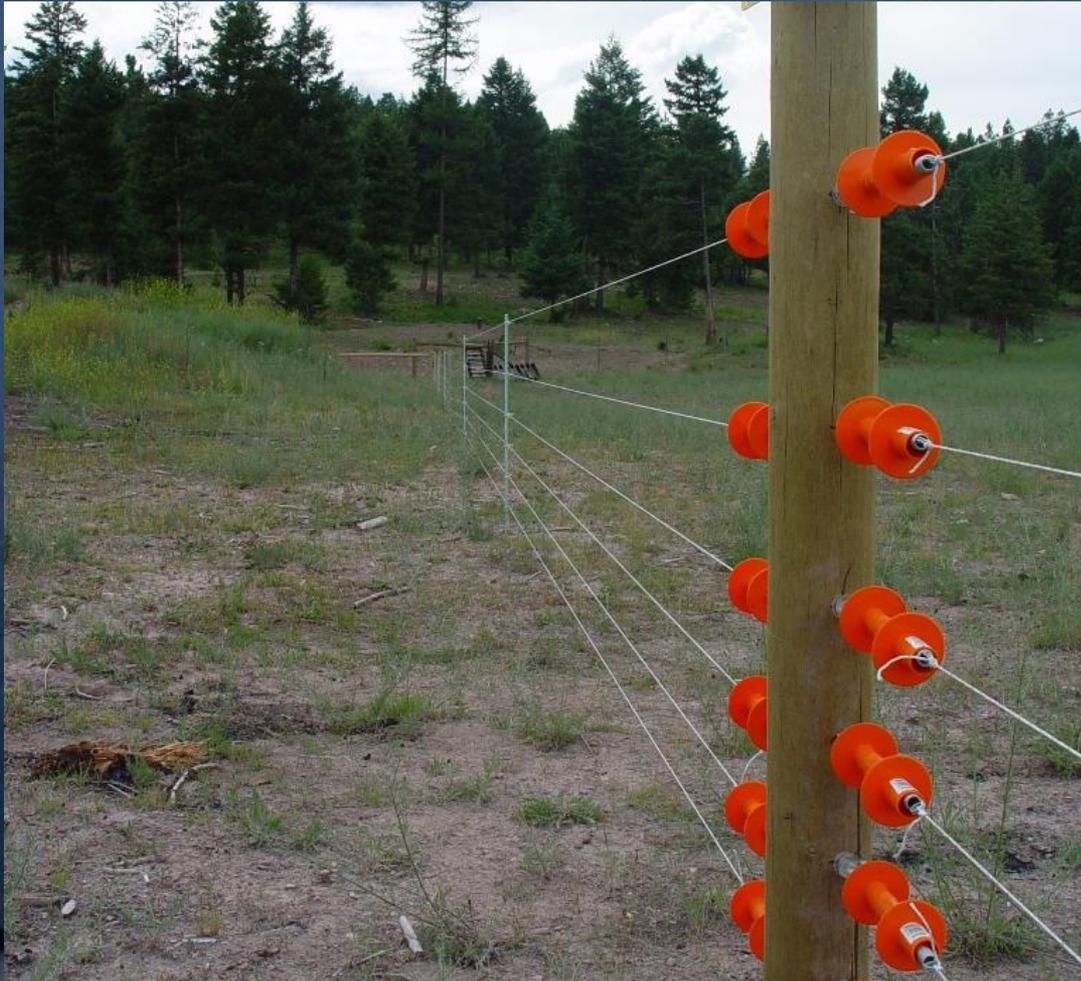
Fladry around a pasture with regular barbed-wire fence

# Tools: fladry, electrified



Fladry around a carcass; wolf approached for days before giving up.  
Washington Dept. of Fish and Wildlife. Video: <https://youtu.be/BmB6-4MplUo>

# Tools: fencing



Permanent electric fence around a relatively small site

# Strategies: carcass removal



Wolves and bears will scavenge and repeatedly return to carcass sites;  
This increases the encounter rate with live stock.

# Strategies: livestock guardian dogs



[www.youtube.com](https://www.youtube.com/watch) › watch ▼

## Livestock Guardian Dogs: Working on Common ... - YouTube

While these Old World livestock guardian dog breeds have successfully defended livestock from predators for ...

Feb 25, 2013 - Uploaded by Conservation Media



# Strategies

*The best tools or strategies are the ones with brains*

Plan, create, adapt.

- Strategic grazing management
- Stockmanship
  - Low-stress herding



# Grazing management & predation?

Ranchers may be able to apply some of the same approaches for

- Rangeland health
- Livestock production

Now documented

- Coexisting with wildlife
- Preventing depredations

Wildlife behavior  
Experiential  
evidence  
Field projects

# Grazing in nature's image

## Prey aggregation (group size)

## Passive anti-predator behavior



- Detection (many eyes)
- Predator confusion
- Risk dilution (selfish herd)
- Attack-abatement

Grazing in nature's image

Prey aggregation (group size)

Active anti-predator behavior



More likely to

- Stand ground
- Protect young
- Fend off a predator

# Scattered animals are easy prey



Lone individuals and small groups are vulnerable, especially if they run  
(and they are more likely to run)

# Grazing in nature's image

Modeled on herding behavior of large ungulates  
in the presence of their predators:

*Aggregation and movement*

- Strategic rotational grazing
  - Stocking density
- Low-stress herding
  - Herd instinct

Barnes 2015. Livestock management for coexistence with large carnivores...  
[white paper]. People and Carnivores.

# Wind River Range, Wyoming

Partnership with 2 ranches, USFS, People and Carnivores



Problem: co-mingled herds weren't staying together;  
Losses to grizzly bears and wolves



**MOULTRIE**     36°F 21.92inHg    PAC 17    14 SEP 2016 07:12 pm



**MOULTRIE**



40°F 21.24inHg

KEYSTONE 5

22 SEP 2014 08:13 am



MOULTRIE

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19°F 21.77inHg

KEYSTONE 1

12 SEP 2014

# Stockmanship training



# Stockmanship training



# Herding for distribution & coexistence



Low-stress herding rekindles the herd instinct  
(release pressure to reward herding-up and good movement)

# Herding for distribution & coexistence



Bedding cattle down in the evening;  
working with a potential bunch-quitter

# Herding for distribution & coexistence

How many riders does it take?



Several riders with mixed paradigms (conventional and low-stress):  
bottleneck

# Herding for distribution & coexistence

How many riders does it take?



Two riders with shared paradigm (low-stress):  
No bottleneck



Wolves and cattle in the same spot on the same day, no problems

# Results over 3 years

Grazing management: some progress

1 herd mostly stayed together

1 herd in larger groups, and more with the other

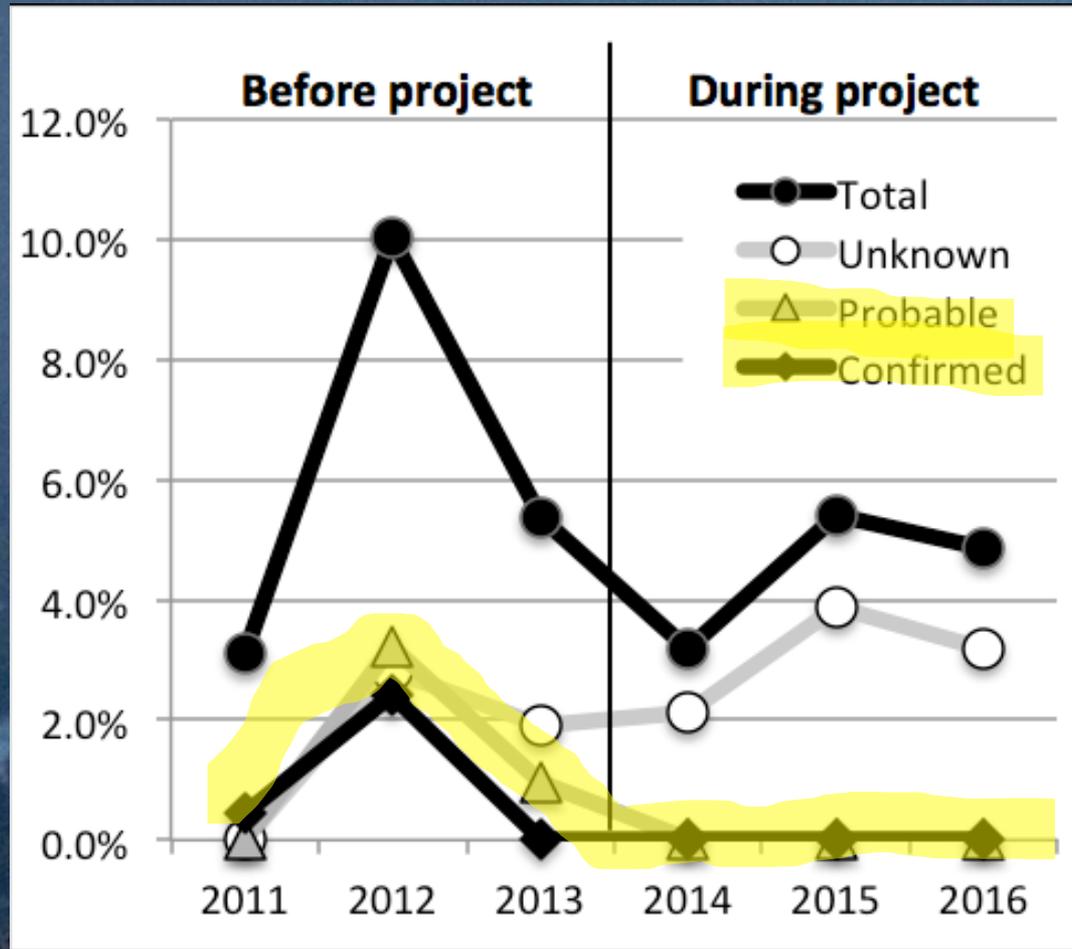
Coexistence:

No known depredations

No wolves or griz removed



# Livestock loss before vs. during herding



No confirmed or probable predation during 3 years of herding  
(Unknown death losses were most likely pneumonia)

# Grazing management makes other coexistence tools more effective

All of the other non-lethal tools...

- Range riders
- Livestock guardian dogs
- Mechanical tools
  - Fladry
  - Light & noise devices



...Work best on small areas

and mechanical tools for a short time

# What might work here?

Various “tools” developed and tried in different places

- Mixed results
- Heavily dependent on context
  - Landscape
  - Management
    - Creativity & adaptive management
- People’s commitment level
- If a tool doesn’t work in one place, it might in others
- A tool is not a strategy





## REDUCING CONFLICT WITH GRIZZLY BEARS, WOLVES AND ELK

*A Western Landowners' Guide*



[westernlandowners.org/stewardship/](http://westernlandowners.org/stewardship/)



## People and Predator Series



### COLORADO WOLVES

The Colorado Wolves series provides science-based information regarding the potential restoration of wolves in Colorado. The series has undergone review by scientists both within and outside CSU.

See links below for FAQ's and Information Sheets.

[Frequently Asked Questions](#) »

[Information Sheets](#) »



Taxonomy and Biology



Wolves in Colorado:  
History and Status



Wolf Policy



Human and Pet Safety



Ecological Effects



Big Game and Hunting



Disease



Wolves and Livestock





**COLORADO STATE UNIVERSITY**

**EXTENSION**

## **What are the potential impacts of wolves on livestock in Colorado?**





# Rangelands

Journal for Rangeland Management  
Volume 37 Number 3 October 2014



# The Stockman Grass Farmer

May 2013 Volume 13 #5  
THE GRAZIER'S EDGE

## KEYSTONE CONSERVATION



Shown above is a herder keeping cattle bunched in a high stock density as they graze. These high stock densities have allowed cattle to graze down to expose dense with no calf losses.

### High Stock Density Grazing Can Help Prevent Predation Losses In Livestock

By Benky Gillette

**QUESTION:** Montana cow-calf operations range in the West be managed to peacefully co-exist with major predators such as wolves and grizzly bears? Matt Barnes, who managed a custom grazing operation in the Southern Rockies before becoming field director of Keystone Conservation, says the answer may be "yes."



some wolf as gray wolves and grizzly bears," Barnes said. "Generally, we're looking for win-win solutions where the land, the ranchers and their livestock, and the native carnivores all benefit."

Keystone Conservation's Rangeland Stewardship Program develops partnerships between ranchers and conservationists to improve rangeland management and conservation.

Continued on p.

# 30 Years In Practice

HMI  
NOVEMBER | DECEMBER 2014  
NUMBER 158  
WWW.HOLISTICMANAGEMENT.ORG

## Preventing Predation of Livestock— Livestock Management for Coexistence with Large Carnivores

BY MATT BARNES

**F**rom both ranching and conservation perspectives, livestock predation by large carnivores has traditionally been seen as a problem, much of the work done to reduce livestock-carnivore conflict has focused on keeping carnivores physically separated from humans and livestock, and on developing tools to manage the carnivores. A more holistic view is that carnivores are an inherent and valuable part of the system, and the root cause of excessive livestock predation is that livestock management has made livestock vulnerable to predators.

Overall, most carnivores are opportunistic, and most bears, wolves, and cougars remain focused on wild prey, even when livestock are nearby. But some individual predators do switch their focus to livestock, and if they do, they are usually lethal. Control is often non-targeted at reducing livestock losses, because removal of individuals not focused on livestock opens up a place for other individuals that may be or become focused on livestock. We cannot expect to eliminate all predations from switching from wild prey to livestock, but we may be able to reduce them to a lower, more manageable level.



Electrified fladry is designed to deter wolves, but can also be used to contain cattle in temporary paddocks. Fladry works best for small areas and short times such as calving season. This calf was born in a fladry paddock on a summer grazing allotment.

are much more manageable. In addition to an expansion of focus from carnivores to livestock, effective coexistence requires a parallel expansion from a focus on tools to developing management tools that can be used on a larger scale.



ResearchGate.net

Academia.edu



Matt Barnes

# Livestock Management for Coexistence with Large Carnivores, Healthy Land and Productive Ranches

Ranchers can apply many of the same management approaches that work for land health and livestock production to prevent conflicts with large carnivores.

*A white paper*

**By Matt Barnes**

*People and Carnivores*

The screenshot shows the ResearchGate interface. At the top left is the ResearchGate logo (R<sup>G</sup>). Navigation links include Home, Questions, Jobs, and Funding. A search bar at the top right contains the text 'Matt Barnes' and a magnifying glass icon. Below the search bar, a dropdown menu shows 'Researchers' with a profile card for Matt Barnes, including a profile picture and the text 'Matt Barnes Shining Horizons ...'. Below the profile card is a link that says 'All results for Matt Barnes'. The main content area displays the article title 'Livestock Management for Coexistence with Large Carnivores, Healthy Land and Productive Ranches', the date 'April 2015', the project name 'Project: Livestock Management for Coexistence With Large Carnivores', and the author's name 'Matt Barnes' with a small profile picture icon.

ResearchGate.net

Academia.edu



Matt Barnes

# Rocky Mountain Wolf Quest

[← View All Quests](#)

GRADE BANDS: HIGH SCHOOL

## Should gray wolves be reintroduced into Colorado?

THE ROCKY MOUNTAIN ECOSYSTEM NEEDS YOUR HELP!

The idea of reintroducing wolves into Colorado's mountains is a controversial issue that stirs up strong feelings. In November 2020 citizens of this state are being asked to vote on a ballot initiative to decide if a plan will be created to bring this predator back. On this Quest, students will become an expert in the complex issue of wolf reintroduction so that they can be an informed citizen, knowledgeable about the scientific facts and empathetic to diverse perspectives. Students will have the opportunity to use their new understanding to help educate others in their family, community, and state about the potential impacts wolves could have on people and the natural ecosystem.

# Leopold: “Thinking Like a Mountain”

“... too much safety seems to yield only danger in the long run. Perhaps this is behind Thoreau’s dictum: In wildness is the salvation of the world. Perhaps this is the hidden meaning in the howl of the wolf, long known among mountains, but seldom perceived among men.”

Leopold 1949





**Matt Barnes**

970-724-9326

[Matt@ShiningHorizons.com](mailto:Matt@ShiningHorizons.com)

[facebook.com/ShiningHorizonsLandManagement](https://facebook.com/ShiningHorizonsLandManagement)



NORTHERN ROCKIES  
CONSERVATION  
COOPERATIVE

[NRCCooperative.org](http://NRCCooperative.org)