Attitudinal differences among residents, park staff, and visitors toward coyotes in Cape Breton Highlands National Park

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Background
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- Coyotes naturally dispersed into the park in the 1970s
- Higher frequency of human-coyote interaction (HCI) since 2000
- Only coyote cause human fatality in North America occurred in 2008
Cape Breton Highlands National Park

Study Area
Research Questions

Are there differences among local residents, park staff, and visitors in their ...

a) Attitudes toward
b) Fear of
c) Likelihood of
d) Control over coming into contact with coyotes
• **Goal** of Human Dimensions research
  – Conceptualize, measure and interpret variables and their relationships in a way that bears meaning on problems of managerial or scientific interest

• **Challenge**
  – Effectively communicating the meaning of abstract statistics (e.g., standard deviation, standard error) for measuring consensus

• **Solution** – Potential for Conflict Index (PCI$_2$)
Potential Conflict Index (PCI$_2$)

- Integrates into one measure information about:
  - Central tendency
  - Dispersion
  - Shape of a distribution

- Uses graphic display: Easy interpretation

- Places findings in managerial context (e.g., the acceptability of a given mgmt. action)
Assumptions (PCI$_2$)

- **Index range:**
  
  $0 \ldots 1$

  (no conflict/ to (most conflict/
  most consensus) least consensus)

- **No conflict** ($PCI_2 = 0$) occurs when:
  - 100% rate mgmt. action in a single category
  - (e.g., 100% “Highly Unacceptable” OR 100% “Highly Acceptable”)
Highly Acceptable

Neither

Highly Unacceptable

Larger bubbles reflect more potential for conflict

Example PCI

Raccoon

Bear

Wolf

Presence

Nuisance

Kills Human
Methods

1. Residents ($n=578; 72\%$ return rate)
   - Mail-out questionnaire 2011

2. Parks Staff ($n=124; 85\%$ return rate)
   - Internally distributed questionnaire 2011

3. Visitors ($n=375; 51\%$ return rate)
   - Trail interviews & mail back questionnaire 2011 & 2012
Attitudes toward Coyotes

Do you think of coyotes as...

- Good, Beneficial, Positive
  - Visitors: 0.13\(^a\)
  - Park Staff: 0.21\(^b\)
  - Resident: 0.20\(^b\)

- Neither
  - Visitors: 0.22\(^a\)
  - Park Staff: 0.31\(^b\)
  - Resident: 0.30\(^b\)

- Bad, Harmful, Negative
  - Visitors: 0.17\(^a\)
  - Park Staff: 0.23\(^a\)
  - Resident: 0.21\(^a\)

Good or Bad?
Beneficial or Harmful?
Positive or Negative?
Fear toward Coyotes

I fear for ...

Strongly Agree

Neutral

Strongly Disagree

My own personal health or safety.  
My children’s health or safety.  
My pet’s health or safety.  
The spread of disease by coyotes.

Visitors  
Park Staff  
Resident

Fear toward Coyotes
The likelihood of the following event occurring to you while in the park...

- Seeing a coyote: 0.38
- Being approached by a coyote: 0.49
- Being approached by a coyote, snarling: 0.53

Likelihood of HCI
Control over HCI

How much control do you feel have from preventing the following form occurring while in the park ...

Control over HCI

Complete Control

Neither

No Control

Seeing a coyote

Visitors: 0.44<sup>a</sup>

Park Staff: 0.39<sup>ab</sup>

Resident: 0.33<sup>b</sup>

Being approached by a coyote.

Visitors: 0.37<sup>a</sup>

Park Staff: 0.41<sup>ab</sup>

Resident: 0.43<sup>b</sup>

Being approached by a coyote, snarling.

Visitors: 0.39<sup>a</sup>

Park Staff: 0.41<sup>a</sup>

Resident: 0.39<sup>a</sup>
Residents generally ...

- Held more negative attitudes toward coyotes
- Reported more fear
- Felt a higher likelihood and in less control of coming into contact with coyotes while in the park
Summary

- Park Staff generally fell in between the opinions of the local resident and visitors

- Visitors generally ...
  - Held more positive attitudes toward coyotes
  - Reported the least amount of fear
  - Felt a lesser likelihood and in more control of coming into contact with coyotes while in the park
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Questions?