Measuring & Predicting Support for Mountain Lion (Puma concolor) Recovery in the Adirondack Park

Elizabeth B. McGovern, MEM
Heidi E. Kretser, PhD
Overview

• Human dimensions of large carnivore re-colonization
• Study Area
• Mountain lions in the Adirondacks
• Goals of the Study
• Methodology
• Key results
• Discussion and Conclusions
Human Dimensions of Carnivore Recovery

- US: Re-colonization, range expansion, reintroduction
- Human-wildlife conflict
  - Livestock and game species
  - Human safety, esp. in urban areas
  - Political issues/power dynamics

Can we use human dimensions research to predict and address conflict before it happens?
Study Area: The Adirondack Park

- Park established 1892
  - 6 million acres
  - Mosaic of public/private
  - 130,000 residents
  - Temperate/boreal ecosystem

- Once home to wolves, mountain lion, lynx, moose

- NYSDEC is natural resource agency
Puma concolor in the Adirondack Park

Sightings

Extirpation

Evidence of Dispersal

Jenkins & Keal 2003
Goals of the Study

Assess baselines for:

- Wildlife Values Orientation
- Factual knowledge about mountain lions
- Attitudes about mountain lion re-colonization
- Risk perception

before a population is established or more dispersal occurs
Methodology: Adirondack Questionnaire

June – August 2013

23 survey locations

– Grocery stores
– Famers’ markets
– Adirondack Loj
– Old Forge Gun Show
– Speculator Craft Fair
– Tupper Lake Woodsmen’s Days
– The Wild Center
– Adirondack Museum

7-minute questionnaire
Methodology: Empire State Poll

• Survey Research Institute at Cornell University
• Randomized telephone survey
• 800 respondents
  – NY state residents
• Compared management preferences
Key results: Adirondack demographics

- Men: 54.9%, Women: 45.1%
- Age 50 or older: 69.9%
- Park Residents: 58% of respondents
  - 62.8% Year-Round
  - Average of 29 years (range 1-80) in the park
- Visitors: 42% of respondents
  - 77% Visit at least once per year
### Key results: factual knowledge

<table>
<thead>
<tr>
<th>Knowledge questions</th>
<th>Correct responses (%)</th>
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<tbody>
<tr>
<td>Did mountain lions live in the Adirondacks in the past? (Yes)</td>
<td>86.7</td>
</tr>
<tr>
<td>Are mountain lion attacks on humans common in areas where mountain lions live close to humans? (No)</td>
<td>72.7</td>
</tr>
<tr>
<td>Are mountain lions found in many countries around the world? (Yes)</td>
<td>37.1</td>
</tr>
<tr>
<td>Do mountain lions prefer to eat livestock, even when wild animals are plentiful? (No)</td>
<td>54.9</td>
</tr>
<tr>
<td>Are mountain lions in danger of becoming extinct worldwide? (No)</td>
<td>17.1</td>
</tr>
<tr>
<td>Do mountain lions kill a large number of pets in areas where mountain lions live near homes with pets? (No)</td>
<td>47.3</td>
</tr>
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Average score = 51%
Key results: risk perception

- Risk Score
  (Affective measure)
- Risk Ladder
  (Cognitive measure)
- Significant differences:
  - Gender
  - Hunters v. Non-hunters
    (affective only)
  - Regular hikers v. Non-hikers
    (cognitive only)
Key results: support for restoration

- I would like to have mountain lions naturally return to the Adirondacks
- I would like mountain lions to be intentionally released into the Adirondacks
“Should wildlife management agencies take steps to establish a permanent mountain lion population in the Adirondack Park?”
Key results: knowledge, risk and support

Support for Natural Return of Mountain Lions

R² = 20.8% (R² adj = 19.5%) All significant predictors (p<0.05)
Key results: comparison to ESP

“I would like to have mountain lions naturally return to the Adirondacks”

“Should wildlife management agencies take steps to establish a permanent mountain lion population in the Adirondack Park?”
Discussion

• Low overall knowledge
• Differences in risk perception between men and women
• Relationship between risk perception, knowledge and support for restoration
• Differences in support for different levels of intervention
  – Natural re-colonization as most popular
• Limitations of convenience sampling
• Limits of hypothetical situation
Conclusions

• Need for detailed research on ecological feasibility
• More studies of non-hypothetical attitudes (US and Canadian)
• Educational outreach and preparing communities

Full survey, analysis and results available in:
Thank You

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WCS Adirondack Program

Yale School of Forestry & Environmental Studies