Psychological Drivers of Mountain Lion Management Preferences Among Texas Stakeholders

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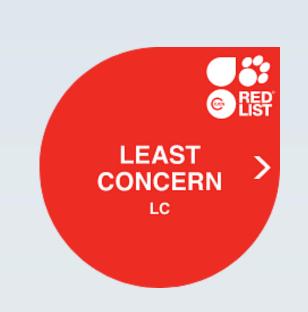
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Introduction

- Large carnivores need space and food = making coexistence a challenge.
- One such large carnivore is the mountain lion (*Puma concolor*).
- **Objective**: Assess how wildlife value orientations, willingness to coexist, risk perception and trust shape public management preferences toward mountain lions in Texas.



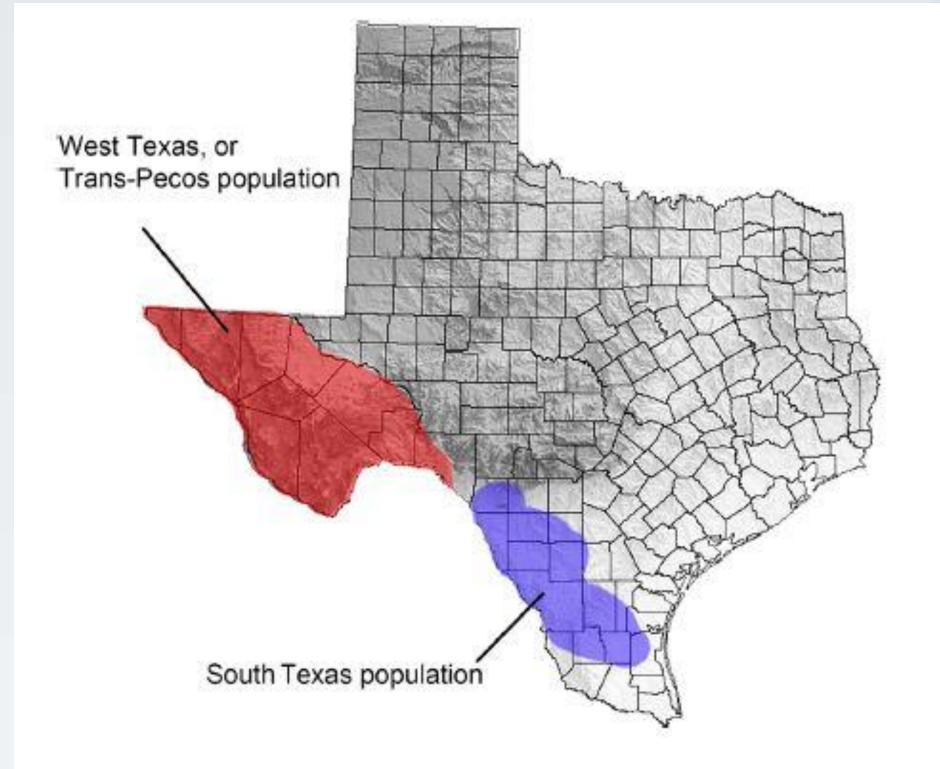


Fig 1. Main populations of mountain lions in Texas

Discussion

- Coexistence with mountain lions in Texas is shaped by complex and sometimes contradictory psychological drivers.
- Understanding psychological drivers helps anticipate support or resistance to future policy shifts.
- Contrary to previous studies, even those with more anthropocentric values expressed some willingness to coexist.
- **Trust** emerges as a pivotal factor for shaping preferences toward less aggressive management.
- Non-lethal approaches are more acceptable when paired with trust in agencies.
- Human dimensions of coexistence as a gap in the mountain lion management in Texas (TPWD 2024).

Methods

- We administered an online questionnaire to capture input from diverse stakeholder groups.
- We tested a path model to measure how psychological variables affect preferences for managing mountain lion interactions.
- We conducted a two-step Structural Equation Modeling analysis using LISREL 13.

Results

- The online questionnaire was completed by **1,069** respondents.
- Both domination and mutualism orientations were positively linked to willingness to coexist with mountain lions -- A surprising twist.
- Greater trust in agencies and lower perceived risk supported less-lethal management preferences.
- Stronger domination values were negatively associated with trust in the state.
- Risk perception had little effect on coexistence willingness.
- Higher coexistence predicted support for non-lethal management.

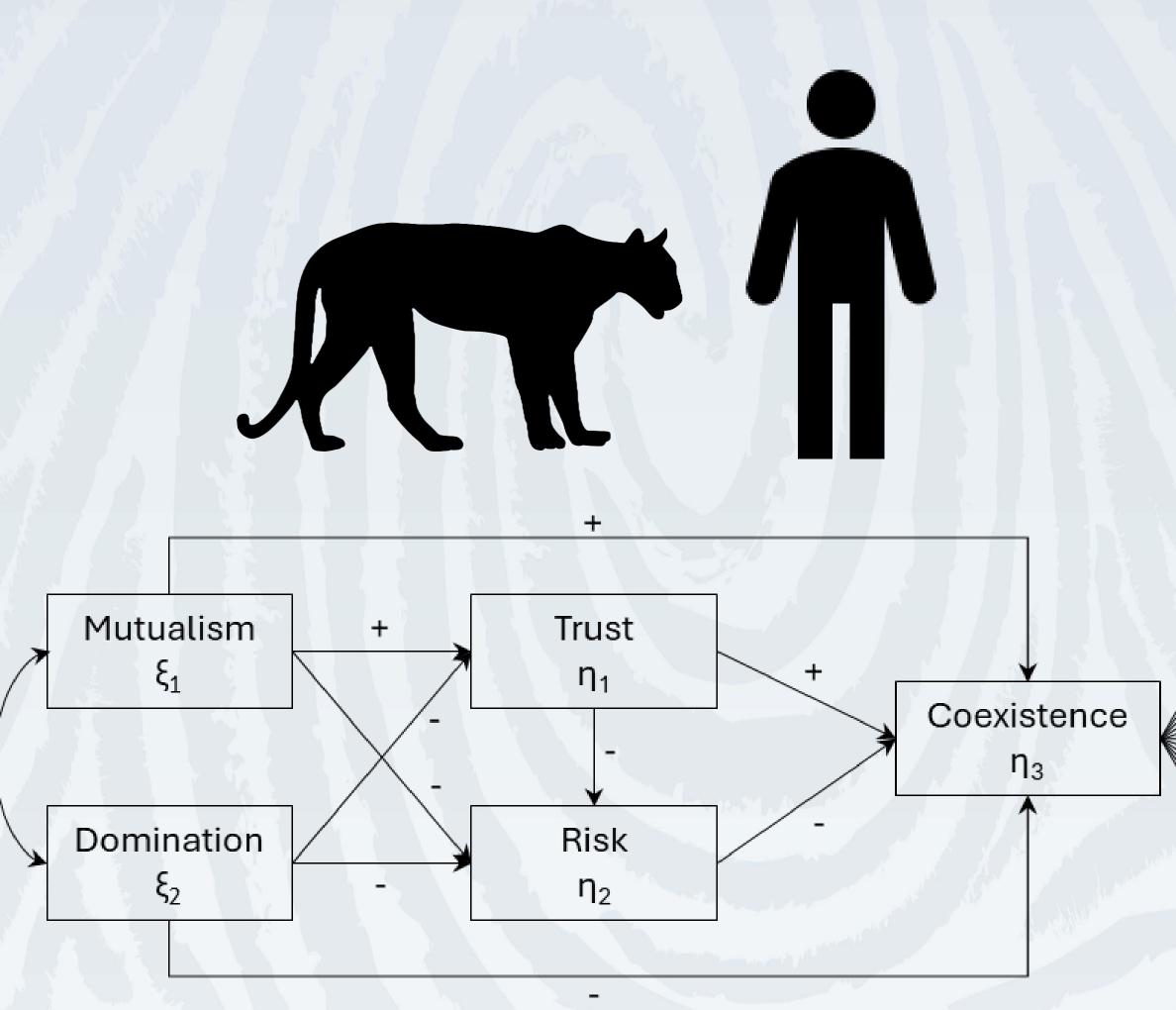


Fig 2. Hypothesized model of Texans' management preferences for mountain lions.

Management Preference 1 H_{4} Management Preference 2 Management Preference 3 Management Preference 4 Management Preference 5 Management Preference 6 Management Preference 7 η_{10} Management Preference 8 η_{11} Management Preference 9 η_{12} Management Preference 10 Management Preference 11 η_{14}

Conclusion

 Building trust among landowners and managers is critical to enabling coexistence and informing future mountain lion policy in Texas..

Credits and References

- Davenport, M. A., Nielsen, C. K., & Mangun, J. C. (2010). Attitudes toward mountain lion management in the Midwest: implications for a potentially recolonizing large predator. Human Dimensions of Wildlife, 15(5), 373-388.
- Texas Parks & Wildlife Department. 2024 Mountain Lion Stakeholder Group Report. PWD W7000-2071 (1/24). 55pp.
- © NPS / Mountain Lion Foundation / TPWD



