



# Society & Natural Resources

## An International Journal

ISSN: 0894-1920 (Print) 1521-0723 (Online) Journal homepage: <https://www.tandfonline.com/loi/usnr20>

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To cite this article: Melissa M. Kreye, Elizabeth F. Pienaar & Alison E. Adams (2017) The Role of Community Identity in Cattlemen Response to Florida Panther Recovery Efforts, *Society & Natural Resources*, 30:1, 79-94, DOI: [10.1080/08941920.2016.1180730](https://doi.org/10.1080/08941920.2016.1180730)

To link to this article: <https://doi.org/10.1080/08941920.2016.1180730>



Published online: 31 May 2016.



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## The Role of Community Identity in Cattlemen Response to Florida Panther Recovery Efforts

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### ABSTRACT

The concept of community identity has often been employed to explain ways in which communities respond to agents that impact community well-being. Using a case study of the Florida cattlemen community, we examine how cattlemen understand and perceive regulatory efforts to recover the Florida panther on private ranch lands. The data comes from participants in the Florida cattlemen community, and was collected through in-depth interviews ( $n = 13$ ), group interviews ( $n = 32$ ), and written comments associated with a survey about panther conservation ( $n = 78$ ). Our findings indicate that some cattlemen in Florida have a strong sense of community identity. Perceptions of government actions and variation in economic risks are critical factors in understanding how this community responds to federal interventions. Our findings suggest that the concept of community identity can be used to explain the responses of agricultural landowners to governmental policies that are perceived as a threat to collective identity.

### ARTICLE HISTORY

Received 21 August 2015  
Accepted 17 March 2016

### KEYWORDS

Cattlemen; community identity; endangered species; government regulation; landowner incentives; panther

Extant research has highlighted the importance of community identity in cases where residential communities face perceived threats from a variety of sources (Dalby and Mackenzie 1997; Shriver and Kennedy 2005; Shriver, Adams, and Messer 2014; Adams, Shriver, and Messer 2015). A community's collective identity may help facilitate organized responses and opposition to threats, or foster acquiescence and acceptance (Messer, Shriver, and Adams 2015). Unfortunately, little is known about the role of community identity in cases where agricultural communities perceive government interventions as a threat to community wellbeing. The question remains: How do agricultural communities' collective identities inform how members understand and respond to environmental regulations and conservation incentives that are implemented by the government?

This article examines how the cattlemen community in Florida defines and responds to federal efforts to protect and recover the endangered Florida panther on private rangelands. The Florida panther is a predator that ranges on cow-calf operations in southern Florida (Main and Jacobs 2014). Owing to the panther's protected status, cattlemen are prohibited from killing or removing panthers that prey on their livestock and game animals (U.S. Fish and Wildlife Service [USFWS] 2008). This, along with recent increases in the

panther population, has made the protection of the Florida panther a highly contested issue between cattlemen and government wildlife agencies.

To explain cattlemen's perceptions of and responses to panther recovery efforts, as well as their willingness to enroll in a payment program that is intended to protect panther habitat on private rangelands, we draw from literature on community identity and community attachment (Shriver and Kennedy 2005; Mannarini and Fedi 2009; Shriver, Adams, and Messer 2014; Adams, Shriver, and Messer 2015). Data were collected from cattlemen most likely to be targeted by the payment program (i.e., cattlemen who own or operate livestock ranches in the panther's range). We used written comments from an economic survey as the main data source for this analysis. These comments were analyzed using line-by-line coding to identify key concepts. Our findings were supported and augmented by data collected through semistructured interviews ( $n = 13$ ) and focus group meetings ( $n = 32$ ) conducted earlier in the study, as a precursor to designing and implementing the economic survey (Pienaar, Kreye, and Jacobs 2015). This research expands the use of community identity from investigating how residential communities face perceived environmental threats to determining how agricultural communities may respond to conservation interventions on private lands, which has implications for decision making by wildlife agencies.

### **Community Identity, Attachment, and Collective Response to Threats**

The concepts of *community identity* and *sense of community* are often used by sociologists and political scientists to explain the experience and meaning of community (e.g., Mannarini and Fedi 2009). One's sense of community can be based on personal perceptions, as well as on perceptions believed to be widely shared among community members (Colombo and Senatore 2005). More specifically, the expression of common values can facilitate an emotional connection among individuals and lead to an enhanced sense of community (Mankowski and Rappaport 1995; Manzo and Perkins 2006). For example, Adams, Shriver, and Messer (2015) found cultural factors, such as values about loyalty, to be an important part of community identity and a primary reason that one residential community remained quiescent when faced with environmental threats.

Inclusion in a community may depend on whether individuals are located within a given geographical boundary. For example, a collective response to the threat of environmental pollution has been found in communities that are physically located near the source of pollution (e.g., a hazardous waste dump) (Bailey, Faupel, and Holland 1992; Wulforth 2000). Conversely, participation in organized social (or civic) settings, such as a professional association, may foster a sense of community in individuals even though they do not reside in the same physical location. These organized settings provide members with the opportunity to construct shared narratives while participating in the same activities, aims, and efforts (Mankowski and Rappaport 1995). In other words, social participation allows individuals to link self-narratives with the experiences and expressed values of other community members (Arnould and Price 2000).

*Community attachment* can enhance a person's sense of community, and is a measure of individuals' sentiments toward the community in which they live and subsequent rootedness in that community (Trentelman 2009). In rural communities, attachment is linked with a sense of place and connection to the symbolic landscape (Wulforth 2000). Changes

to the landscape may be perceived by the community as indicative of changes in the role or identity of community members, which in turn may be perceived as a threat to community identity. Exemplary of this are rural agricultural communities where farming (or ranching) gives farmers their identity and a sense of achievement (Allison 1996; Sorice et al. 2012).

The practice of increasing production is often incorporated into the identity of being a good farmer (Wilson 2001; Sorice et al. 2012). Efforts to change the farmer's role, from being the advocates of production to promoters of conservation (i.e., through government interventions), have frequently been met with resistance from farmers. This resistance can be attributed to farmers' concerns about identity loss or loss of traditional roles in society, as well as anticipated economic impacts (e.g., low returns on investment) (Burton 2004).

Threats to community identity are the perception of increased risk that a particular harm will occur to members within the community (i.e., a change in well-being). Changes in well-being have been linked to changes in the health and status of community members, as well as to changes in the local economy (Bailey, Faupel, and Holland 1992; Wulfhorst 2000). For example, heavy metal contamination originating from the smelting industry was perceived as a threat in Blackwell, OK, when the health of community members was impacted (Shriver, Adams, and Messer 2014). Likewise, government regulations may be seen as a threat to agricultural communities if these regulations are perceived to undermine the agricultural economy or the role of farmers.

Communities that are divided in deciding how they should respond to the threat can appear quiescent or inactive in formulating a collective response (Adams, Shriver, and Messer 2015). Those in power may ignore the needs of the community in future decision making if there is no unified response or complaint to address. A community may not agree on how to respond when there is a lack of credible information surrounding an issue or event, or when the information available is ambiguous (Shriver and Kennedy 2005). Regulatory agents, or those in power, sometimes choose to control important information, which can frustrate a collective response. Alternatively, some communities depend on the collective memories of community members to help inform a response to perceived threats (Adams, Shriver, and Messer 2015). Shared narratives about past conditions can help community members triangulate important details about the threat. However, the construction of collective memory is highly subjective and can be contested among community members, leading to differences in response (Olick, Vinitzky-Seroussi, and Levy 2011). Finally, differences in economic impacts among community members may divide communities, reducing the likelihood that they will collectively mobilize against a perceived threat (Roberts 1997; Shriver and Kennedy 2005).

In this article we draw on the concepts of community identity and community attachment to examine how cattlemen in Florida respond to Endangered Species Act (ESA) regulations protecting the Florida panther. We also identify factors that may serve as barriers or facilitators to cattlemen participating in a payment program to protect panther habitat on private rangelands. Federal conservation efforts are increasingly focused on private lands. Therefore, there is a need to better understand the response of the agricultural community to proposed and existing government interventions. The community identity framework can help inform how programs may be structured to increase community support and participation, thereby augmenting more conventional approaches (e.g., quantitative economic analysis). Because the cattlemen community in Florida is

physically spread out and geographical or political boundaries cannot be the basis for community identity or inclusion, we analyze community identity as a discursive and socially constructed shared narrative (Mankowski and Rappaport 1995; Shriver et al. 2000).

## Data and Analysis

In 2012, the U.S. Census of Agriculture identified more than 21,000 cow-calf operations in Florida, containing more than 1.7 million cows and generating up to \$5 billion dollars annually in sales (U.S. Department of Agriculture [USDA] 2012). Our data collection efforts focused on individuals most likely to be targeted by a payment program to protect panther habitat (i.e., cattlemen with medium to large operations located within or near the panther breeding range).<sup>1</sup> To connect with this population we conducted data collection through a trusted professional organization, the Florida Cattlemen's Association (FCA), which has approximately 3,500 members located throughout the state.

Initially, we used purposive sampling to interview respected leaders in the community and snowball sampling (Babbie 1998) to identify additional members to interview. Participants in the initial study ( $n = 45$ ) included ranch owners, ranch managers, leaseholders, and feed store and stockyard owners from seven counties in southwest and south-central Florida (i.e., the panther's breeding range and the expansion range into which the panther population is moving). Open-ended questions were used during interviews and group meetings to collect in-depth, issue-specific information regarding livestock operations, land stewardship practices, and conflicts with panthers. Results of those in-depth interviews and focus group meetings are presented in Pienaar, Kreye, and Jacobs (2015), and were used to frame and inform the current study.

From the interviews and focus groups we developed a mail-based survey that was administered to members of the FCA. The survey was designed to measure cattlemen's willingness to accept financial and regulatory incentives in exchange for protecting panther habitat on private rangelands. The survey contained questions about ranch characteristics, land management practices, preferences for different incentive structures (monetary payments, regulatory assurances, advice on land stewardship) and implementing organizations, and opinions about the Florida panther. At the end of the survey respondents were asked to share additional comments or suggestions about the topics presented in the survey. The current article focuses on these written survey comments, and places them within the context of previous findings (Pienaar, Kreye, and Jacobs 2015).

The mail survey was sent to 3,297 anonymous addresses on the FCA mailing list, and in total 267 surveys were returned.<sup>2</sup> Characteristics of survey respondents were compared with the characteristics of ranch operations and ranch owners reported in the 2012 U.S. Agricultural Census. We found cattlemen in south central Florida (the panther's current range) and cattlemen with larger operations (i.e., 500+ head of cattle) responded to the survey more frequently. Survey respondents were also predominately male, which was consistent with the gender demographics of lead ranch operators reported in the U.S. Agricultural Census (USDA 2012).

While the responses collected in the comments section ranged in length, we were able to analyze over 4,300 words left by 78 respondents. We found no significant difference between respondents who contributed comments and those that did not leave comments

in regards to key demographic characteristics (e.g., age, gender, income),  $\chi^2(5, n = 78) = 0.12, p > .05$ , and categories of land ownership (e.g., own land, lease land),  $\chi^2(6, n = 78) = 10.74, p > .05$ . However, we did receive more comments from those with comparatively smaller ranch operations (acres),  $\chi^2(5, n = 78) = 2509.45, p < .05$ , and from individuals (62%) with ranch operations within the panther's current range (i.e., south-central region of Florida). These results suggest that most of the comments used in the study captured the attitudes and opinions of those who are strongly concerned about the implications of panther management on their lands.

The data were coded by two researchers using line-by-line coding (Hesse-Biber and Levy 2006) of key words and phrases, which facilitated an examination of the data for both predetermined concepts (guided by the community identity framework), as well as themes that we had not anticipated. This meticulous and comprehensive approach to analysis allowed us to revisit the data in an iterative process and identify more than 15 relevant themes describing attitudes toward panthers and panther management, family history in ranching, opinions about land stewardship, and opinions about government interventions to protect environmental benefits. Exemplary quotes extracted from the survey comments are presented throughout the article as bulleted lists. Quotes collected during interviews and focus groups (Pienaar, Kreye, and Jacobs 2015) are denoted as such and are used to support our findings derived from the survey comments. Data describing the respondent's ranch operation and demographic characteristics were triangulated with survey comments to help explain group differences in community response to threats. To help construct and verify details about past agency actions, we also conducted interviews with 10 agency representatives and reviewed official reports and documents from the Florida Panther Recovery Implementation Team, the U.S. Fish and Wildlife Service (USFWS), and the Florida Fish and Wildlife Commission (FWC).

## Results

### *Cattle Ranching in Florida*

The history of cattle ranching in the United States extends to when the Spanish first settled in Florida around the 16th century. Subsequent cattlemen crossbred the hardy Spanish "cracker" cow with other pedigrees to develop a more desirable beef cow (Akerman 1976). Cattle in Florida are typically left alone on the range for long periods of time, even during calving season. As such, removing predators was considered an important part of maintaining a cattle business (Akerman 1976). This sentiment has not changed much over the last century, as demonstrated in a comment from a modern cattleman and participant in this study:

- I think if coyotes or panthers are killing stock then they [cattlemen] should be able to shoot or relocate the panthers.

As rural lands in north Florida became more developed, cattle ranching expanded in the south and cattlemen's values focused on maintaining strong private property rights (Akerman 1976; Thatcher, van Manen, and Clark 2009). Today ranch operation sizes range widely from 1 to 5,000 head of cattle, but most operations rear less than 50 head of cattle (USDA 2012). Full-time owner-operators raise livestock for profit and the majority of their income is derived from the ranch. Part-time ranchers generally have smaller operations and engage in full-time work off the ranch (Gosnell and Travis 2005).

Many focus-group and interview participants described ranch operations as being family owned and managed by multiple members of the family, but operations are usually directed by older males who serve as the final decision makers. This was confirmed when we found survey respondents to be predominately male and over the age of 60 years. Family-owned ranch operations are typically handed down from generation to generation, as seen in these quotes:

- My sisters [and I] were left land to us from our parents, Mr. and Mrs. —. Our families have been here since the 1830s.
- This farm has been in our family since the 1800s and we have seen FL panther since then through today.

Despite ranching's long history in Florida, respondents acknowledged that the standard practice of leaving cattle unattended for long periods of time can result in poor accounting of livestock gains and losses and the causes of losses (predation, disease, aborted fetuses, and weather events) (Pienaar, Kreye, and Jacobs 2015; Amit, Gordillo-Chavez, and Bone 2013). Business costs have also increased, as expressed in the following comment:

- It's hard to make a profit even with cattle prices through the roof. Employees must be paid a fair wage with health care and transportation, etc.

Participants agreed that ranching typically does not provide competitive profits or returns on investment compared to other types of land uses (e.g., residential development). Despite economic challenges, survey respondents confirmed that ranchers do receive various nonmonetary benefits from ranching, including lifestyle, pride in their land stewardship, and an important role in local communities (see also Gosnell and Travis 2005).

### ***Efforts to Conserve and Recover the Florida Panther***

The Florida panther (*Puma concolor coryi*) is currently restricted to less than 5% of its historic range, with a single breeding population in south Florida (USFWS 2008). Over the last few decades nearly one-quarter of the state's total area has been converted to residential, industrial, and other intensive land uses (Florida Department of Environmental Protection [FDEP] 2014). As such, loss of habitat and habitat fragmentation are primary causes of species decline (Thatcher, van Manen, and Clark 2009; USFWS 2008).

In 1969, the Florida panther population was estimated to be fewer than 40 adults and subadults and the panther was listed as endangered under the ESA. The ESA provides the regulatory framework to intervene in cases where land use changes cause "harm" to the listed species (Ruhl 2008). ESA intervention typically involves imposing fines on those who violate regulations and encouraging the use of mitigation alternatives<sup>3</sup> to reduce habitat loss or conversion (Ruhl 2008).

During the 1980s federally protected lands were created in south Florida to protect core panther habitat (i.e., the Florida Panther National Wildlife Refuge). Unfortunately, owing to the small panther population, inbreeding resulted in physiological deformities that reduced the panther's reproductive success and stifled population recovery. Accordingly, in 1995, the USFWS implemented a recovery program that used genetic introgression with another closely related subspecies of the genus *Puma* (the Texas cougar) to improve genetic diversity in the Florida panther population (USFWS 2008). Today, the panther population has lost most of the physiological deformities and is reported to have increased to approximately 100 to 180 adults (USFWS 2008).



Despite an increase in the panther population, delisting of the panther requires the establishment of three viable, self-sustaining populations each of at least 240 adults and subadults across Florida and the southeastern United States (USFWS 2008). It also requires securing and protecting sufficient habitat to support panther populations in the long run (USFWS 2008). Private rangelands in Florida offer important habitat and prey for supporting a growing panther population.

However, these lands are at risk of being converted to more intensive uses due to the disparity between earnings from livestock operations and income generated by development (Muhly and Musiani 2009). Based on habitat conversion trends, the USFWS predicted that 32,591 acres of important habitat would be developed over a 5-year period because the ESA would not apply to this land conversion (USFWS 2008).

In an effort to keep rangelands as panther habitat, the USFWS proposed a pilot payment program to help reduce cattlemen's costs associated with living with the panther (e.g., calf depredation, habitat management costs) (Florida Panther Recovery and Implementation Team [FPRIT] 2014). Payments are thought to be an effective strategy for conserving ecosystems (and associated species) on private lands while still supporting rural livelihoods (Ingram et al. 2014). Although these payments are intended to reduce human–panther conflicts, some landowners may continue to oppose ESA regulations that constrain private lands management (Brook, Zint, and Young 2003; Wilcove and Lee 2004). As shown by Dickman (2010), the effectiveness of programs to mitigate human–wildlife conflicts is highly dependent on how well these programs address social factors and conflicts between authorities and landowners (see also Inskip and Zimmermann 2009).

### ***Community Membership and Identity***

Study participants stated that membership status in the cattlemen community is defined foremost by a family history in cattle ranching (the number of generations that a family has engaged in cattle ranching) and shared cultural values. Membership in the FCA was expressed as another important form of social participation. The mission of the FCA is to “promote and protect the ability of cattlemen members to produce and market their products” (Florida Cattlemen's Association [FCA] 2015). By being paying members, cattlemen express their strong commitment to supporting the cattle industry and cattlemen community (Mankowski and Rappaport 1995; Adams, Shriver, and Messer 2015). Interview participants also described other types of social participation that centered around venues such as rodeo events, cattle auctions, professional conventions, informal gatherings at the local feed store, and a periodic dependence on neighbors to help with ranch activities.

Regarding important cultural values, almost all study participants were Caucasian and many identified themselves as being Christian and fiscally conservative. Thematic categories of cultural values included being good land stewards, defending personal freedom, resisting government control, and determining one's own destiny (e.g., self-reliance). For example, some narratives described how cattlemen, as a community, help care for the land:

- I think most cattlemen keep wildlife habitats on the ranches. Along with keeping water quality good we are great stewards of the land.
- Most true landowners already have a deep appreciation for the land and practice good stewardship.



These statements were consistent with survey findings that revealed cattlemen often engage in stewardship actions, including rotational grazing and prescribed burning. Respondents also considered themselves to be experts in land management, relative to government agencies, as seen in the following quotes.

- Government programs, such as this one, employ inferior biologists who are unable to procure employment in the competitive job market.
- We manage the land at much higher levels than government agencies.

Concomitant with values about stewardship, cattlemen also hold strong opinions about private property rights. Cattlemen are resistant to the idea of being compelled, through either regulations or incentives, to manage their land according to government recommendations. Several respondents expressed a strong resistance to government interventions, as seen in these quotes:

- Sometimes the government needs to back off... we have a small operation but want to be able to keep our property without too much government involvement.
- Landowners should have right to manage his/her land how he/she sees fit, end of discussion.

### ***Exploring Definitions of the Threat***

#### ***Is the Panther the Threat?***

Survey comments and interviews revealed variation in cattlemen's attitudes toward the Florida panther. Differences were impacted by cattlemen's memories of past conditions and the information disseminated by government agencies. For example, some interview participants claimed that initial population estimates for the panther were too low because agencies failed to account for panthers occurring on private lands. Conversely, agency biologists argue that population estimates were based on telemetry data for radio-collared panthers, which occupy both private and public lands.

Despite disagreement about the initial panther population size, cattlemen contend that the community was not opposed to listing the Florida panther as an endangered subspecies of cougar (Pienaar, Kreye, and Jacobs 2015). However, at the time of ESA listing, cattlemen perceived the panther to be timid, aloof, and a minimal threat to both cattle ranching and game hunting. The threat emerged when genetic introgression caused an increase in the panther population. Cattlemen have expressed concerns that the "hybrid" panther is a larger and more aggressive animal. Agency biologists contend that the physical traits of panthers prior to introgression were indicative of genetic inbreeding, and genetic introgression improved the health of the panther. Cattlemen's disagreement with agencies about the condition of the panther, and ambiguity surrounding agency motives and actions, have led some cattlemen to oppose panther conservation efforts. This opposition is acted out by refusing to acknowledge that the panther should be protected under the ESA as an authentic Florida panther. Several cattlemen explained their stance:

- The Florida panther is extinct. The mountain lions the "feds" have released are not native or part of our food chain.
- The panthers in Florida today are hybrids of Texas cats. They are an invasive species, not a true native Florida panther.

Perceived inconsistencies in agency actions also increased concerns that the USFWS and FWC are withholding important information about the panther, or that agencies continue

to underestimate the true size of the panther population, as seen in these illustrative quotes:

- My belief is that there are more panthers out there than we realize.
- They are above carrying capacity in South Florida and that is why calf losses and losses of other mammals are increasing.
- This [agency] program has no idea how many panther actually exist in Florida ... this [panther recovery] program continues to mislead the public about the seriousness of the situation.

There were also concerns that greater numbers of panthers pose an increasing threat to human safety, as seen in these quotes:

- These big cats that were shipped in here are a great danger to humans. Get rid of all non-native panthers.
- I do not want to be afraid to walk around our property, because the panther has more rights than I do. I don't want a Florida panther to have one of my grandchildren in his mouth.

Our findings are consistent with research by Treves, Naughton-Treves, and Shelley (2013), who demonstrated that the increase in the wolf population in Wisconsin increased fear of wolves and support for lethal control of wolves that prey on livestock or game animals.

Despite increases in the population brought about by genetic introgression, some cattlemen did not view the panther as a threat. These cattlemen considered living with the panther to be part of ranching, as seen in these examples:

- We have had a female panther for the last 6 years and she has had two offspring for 5 out of 6 years. She is a welcome part of our ranch.
- I am concerned that the panther will prey on my game wildlife, but I understand the need to conserve and recover the panther.
- Doing our best to live in harmony with them [the panthers].

### ***Are Government Regulations the Threat?***

Regardless of different attitudes toward the panther, we found cattlemen were consistent in their concerns regarding government interventions on private ranch operations. Because cattlemen are compelled to comply with ESA regulations (or face penalties), many are frustrated that they cannot control “problem” panthers that prey on calves, the same way they control other predators.

A few cattlemen mentioned a policy of “shoot, shovel and shut up,” indicating that if necessary they may choose to covertly remove panthers that pose an economic threat to their cattle operations (Pienaar, Kreye, and Jacobs 2015; see also Treves, Naughton-Treves, and Shelley 2013).

Agency biologists contend that there is no guarantee that removing a problem panther will reduce calf depredation rates, as other predators may be responsible for depredation events or may move in and cause calf depredation. Agencies are also resistant to relocating panthers because these efforts are generally unsuccessful. As such, being obligated to bear the costs of protecting problem panthers has led many cattlemen to perceive ESA regulations as a threat to their livelihoods and lifestyle. As one cattleman eloquently stated, “Cow-boys, not panthers, are at risk of extinction.”

Adding to the frustration of imposed obligation, cattlemen argue that they have been excluded from agency decision making regarding panther recovery and management.<sup>4</sup> This

has led cattlemen to be skeptical of federal efforts to recover the panther and to claim that wildlife agencies and environmental regulations do not support the rights of landowners and cattlemen, as seen in these examples:

- I'm concerned that there will be more regulations that will infringe upon the property owners as has been done with any protected animals.
- There are such things as private property rights ... the landowner should be able to do what is necessary without the threat of becoming a criminal.

Despite these strong concerns, the community has so far failed to take collective action. This failure is notwithstanding the availability of platforms to enact a formal collective protest, either through the FCA or the Florida Farm Bureau. Individual cattlemen have attempted to respond by attending public meetings hosted by wildlife agencies regarding panther recovery efforts. During these interactions cattlemen proposed that the agencies reassess panther population estimates and allow the use of depredation permits to remove problem panthers. This outcry from individuals has resulted in the Florida Panther Recovery Implementation Team formally inviting cattlemen and landowners to public meetings to discuss panther recovery. Moreover, two commissioners for the Florida Fish and Wildlife Conservation Commission engage in ranching in Florida. It is unclear whether these actions will be considered sufficient to address community members' concerns.

### *How is the Threat Manifested on the Landscape?*

The panther's current documented breeding range is in south Florida. Therefore, it is unsurprising that we found individuals with cattle operations in southern Florida to be strongly concerned about the costs of living with the panther. We also found that the impact of losing a calf to depredation increases as ranch size decreases—that is, costs of calf depredation are disproportionately higher on smaller ranches. Several respondents stated concerns based on ranch location and size:

- I live near the management area. I am a small sole proprietor woman farm[er] with a small herd. I have lost 5 cattle at one time- cows-to panthers. ... I can't afford to replace any lost cattle or calves [due to panther depredation].
- We do have significant calf crop loss each year due to either coyote or panthers ... [we] have a ranch nestled within less than 10 miles of the Myakka State Park—where panthers are very prominent.

Conversely, some cattlemen acknowledged that they are minimally impacted by the panther. In general, their ranch operations are further away from the current breeding range, thus reducing the risk of interacting with the panther, as stated by some respondents:

- Our land has had evidence of panther use years ago (1970s–early 1980s). We found killed deer with guts eaten out of carcasses. Never noticed calves involved.
- I personally witnessed a panther crossing a secondary paved road about 1/2 mile north of the most northern fence on my property 3–4 years ago. This is the only time I ever saw a panther in Polk County.

### *Attitudes Toward Receiving Payments*

Cattlemen's response to the offer of compensation through a government payment program was mixed and influenced by cultural values and the program's perceived utility.

Some cattlemen expressed willingness to accept compensation for living with the panther, as seen in these comments:

- There should be a fair system of compensation for cattle loss due to the Florida panther.
- We would love to be a part of this [payment] program if and when it gets the go ahead! Other cattlemen desired some type of compensation, but struggled with how this may conflict with their cultural values and attitudes towards government interventions that affect land management:
- Caring for animals has always been important for my wife and myself. However, I am concerned about the overreach of government's involvement in saving near extinct animals.
- We are very in tune with the wildlife that inhabit our property and I worry that regulation from the use of government funds will hinder my current operations.
- As a landowner it would take a very large incentive for me to allow my property rights to be taken away.

Finally, some cattlemen refused to enroll in any of the proposed payment programs described in the survey. One explanation came from the interviews and focus groups where cattlemen argued that being compelled to accept compensation payments is akin to forced dependence on the government for social welfare. Philosophical opposition to the concept of social welfare was also expressed in survey comments related to the size and responsibilities of the federal government, as voiced in these concerns:

- Government is the problem, not the answer!
- Trillions in debt, double digit unemployment, 1 in 4 kids going to bed hungry and we spend money on the panther.
- We have too many government give away programs. Reduce the size of our government and have a balanced budget.

## Discussion and Conclusions

The outcomes of this study complement studies that have focused on attitudinal and social factors that underpin human–felid conflicts (e.g., Dickman 2010; Marchini and Macdonald 2012; Amit, Gordillo-Chavez, and Bone 2013). We extended the literature by applying the concepts of community identity and attachment to a specific case study, namely, Florida cattlemen's responses to ESA regulations that protect the panther and programs to compensate cattlemen for panther conservation.

We found owning a few cattle does not make one a “real cowman” in Florida. A family history of ranching is key to community identity. Shared narratives about intergenerational ranching and cultural values help to facilitate an emotional connection among cattlemen, enhancing their sense of community (Mankowski and Rappaport 1995). Participation in a professional association (FCA) also enhances cattlemen's sense of community because community members actively engage in shared activities (cattle ranching and hunting), aims (advancing the cattle industry), and efforts (attending meetings and social events, paying dues) (Arnould and Price 2000).

Shared narratives about intergenerational ranching indicate that cattlemen are strongly attached to the ranching landscape and may oppose changes to the landscape (Trentelman 2009). Narratives about being good stewards of the land indicate that cattlemen consider the ranching lifestyle to be in line with ecosystem conservation. However, the identity of

being a good rancher includes killing predators that cause harm to livestock and cattle production (Marchini and Macdonald 2012; Wilson 2001), which is inconsistent with the conservation of endangered felids. As such, regulations that prohibit lethal control of the panther are seen by some cattlemen as preventing them from carrying on their traditional role as protectors of livestock (Burton 2004). Simultaneously, increases in the panther population have led to perceived changes on the ranching landscape (e.g., increased calf depredations and threats to human safety), reinforcing the belief among cattlemen that changes are being unfairly imposed on the cattlemen community. Altogether, changes in community well-being were linked to loss of traditional roles, risk of increased costs (e.g., calf depredation), and the perceived erosion of private property rights.

The way that community members defined threats centered on the role of government and ESA regulations that prohibit lethal control of the panther. Despite a unified definition of the threat, how community members responded to the threat differed across groups. Factors driving group response were largely informational (e.g., collective memory), situational (e.g., location of ranch operations), and socially specific (e.g., cultural priorities of the group). Some cattlemen hold the belief that wildlife agencies are purposely withholding information to gain power and stated that they want to participate in future decision making about panther management (Thornton and Quinn 2009; Shriver, Adams, and Messer 2014). Other cattlemen responded by denying the legitimacy of the panther in hopes this will help to remove the ESA listing of the panther and advance cattlemen's collective interests (Shriver and Kennedy 2005). Cattlemen who own lands outside the panther's range were less concerned about panther conservation, although they expressed concern about the role of government.

Perceived governmental mismanagement of large predators has been found to impact community tolerance of those large predators (Gangaas, Kaltenborn, and Andreassen 2015). Direct dependence on agricultural income may also increase perceived risks associated with large predators (Bjerke, Reitan, and Kellert 1998; Kaltenborn, Bjerke, and Vittersoslash 1999). Some cattlemen may have responded to the threat by remaining quiet about the presence of panthers on their property, which is consistent with the low response to the survey. This is likely out of concern about potential regulatory penalties, or possibly a desire to covertly control problem panthers if necessary (Marchini and Macdonald 2012; Treves, Naughton-Treves, and Shelley 2013).

While cattlemen share similar values, individual cattlemen appear to weigh cultural values differently, leading to differences in who would be willing to receive payments. Some cattlemen consider panther recovery to be consistent with land stewardship. For these individuals, payments are an actualization of stewardship values (Langpap 2004). Cattlemen in close proximity to the current panther breeding area, who have strong economic concerns about livestock losses, also expressed willingness to accept cash payments despite personal objections to government interventions. However, an emphatic group of cattlemen stated that they would refuse to accept any type of compensation or payment from the federal government, and claimed that accepting compensation would degrade their cultural values of self-reliance, private property rights, and fiscal conservatism.

The outcomes of this study have broader implications for human conflicts with large carnivores and the use of regulations to attain species recovery. Strict regulatory approaches may work against recovery efforts if they are perceived as placing an unfair burden on landowners. Offering landowners payments could help alter the perception that

government regulations are unfair, even if only a portion of the community chooses to participate in a payment program. Reframing the discussion as payments for good stewardship practices by landowners (rather than referring to “compensation”) may also discourage the perception that payments are part of a welfare program. This could help achieve conservation goals without having to first address issues related to trust, because cooperation between landowners and agencies may be triggered by norms of reciprocity (Cook, Hardin, and Levi 2005; Raymond 2006). Nonetheless, payments only address a landowner’s economic concerns and not the loss of well-being associated with changes in community identity.

As such, it would be sensible to design a payment program that supports other aspects of community identity, such as values about maintaining personal and political autonomy. This may be done by implementing the program through a nongovernmental organization and requiring relatively short contract durations (Layton and Siikamäki 2009).

In Florida, cattlemen who choose to engage in panther conservation efforts may start to change both the landscape and the community narrative, whereas those who refuse to accept payments will reinforce opposition to panther recovery. This dichotomy in response can lead to the perception that the cattlemen community is quiescent toward panther recovery efforts. However, agency leaders do not need to wait for a collective response to start addressing cattlemen’s needs through the use of carefully designed incentive programs. Future research should investigate how cattlemen’s perceptions about the panther change after a payment program is made available.

## Acknowledgments

We thank the Florida Cattlemen’s Association for helping us connect with individuals to participate in this study.

## Funding

We thank the U.S. Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission for providing financial support for this project, FWC agreement 13140.

## Notes

1. Almost 40% of cattle operations in Florida have fewer than 20 cows. Because of their small size, these operations are unlikely to be enrolled by government agencies in programs that aim to protect large areas of contiguous habitat.
2. Out of privacy concerns the FCA did not release its mailing list to us; therefore, we were unable to identify and target valid survey recipients. Based on the proportion of valid responses received (e.g., a response from an individual actively engaged in cattle ranching) we estimate a 9–10% response rate. Postsurvey interviews revealed that some individuals who received the anonymous survey refused to respond out of concern that their answers could be used by government agencies to identify them and impose ESA regulations on their lands or operations.
3. Mitigation may be accomplished by placing conservation easements on habitat of similar ecological value to the panther, purchasing credits from a habitat conservation bank, or the development of a Habitat Conservation Plan (Kreye and Pienaar 2015).
4. This issue has recently been addressed by including a FCA representative on the Florida Panther Recovery Implementation Team.



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