Societal dynamics in grizzly bear conservation:

Vulnerabilities of the ecosystem-based management approach

By Douglas Clark

CONSERVING GRIZZLY BEAR POPULATIONS is a significant challenge for wildlife managers throughout North America. Much fruitful research has been conducted on the biology of grizzlies, but how to craft policies that will suffice to conserve grizzlies at biologically meaningful spatial scales remains poorly understood. This task, which demands interjurisdictional cooperation in complex and varied social contexts (e.g., Herrero 1994; Herrero et al. 2001; Mattson et al. 1996), can create conflicts between management agencies and local residents that can jeopardize ecosystem management and planning programs—programs that often feature grizzlies as key components (Clark and Slocombe 2005; Primm and Murray 2005). Broadly, the goal of this study was to understand how and why such conflicts occur. I used qualitative data analysis and case study methods (Miles and Huberman 1994; Yin 2003) and the policy sciences' interdisciplinary problem analysis framework (Clark 2002) to analyze and compare four case studies of grizzly bear management in Canada (fig. 1, next page):

1. Foothills Model Forest (FMF), Alberta (including Jasper National Park)
2. Southwestern Yukon Territory (including Kluane National Park)
3. North slope of the Inuvialuit Settlement Region (ISR), Northwest Territories and Yukon Territory (including Ivvavik National Park)
4. Baker Lake, Nunavut (no park nearby)

Using established and culturally appropriate interview methods (Huntington 1998), I conducted 59 interviews with decision makers and stakeholders at these four sites from 2003 to 2005. Working with the Champagne and Aishihik First Nations in the southwestern Yukon, we held a series of focus groups to investigate bear management in detail. Using HyperResearch software (http://www.researchware.com), I transcribed and coded all recorded material for analysis. My interpretation of results was enriched by 12 years of experience working for Parks Canada, including two years of involvement with grizzly bear management in Kluane National Park. The views and conclusions expressed are my own and do not necessarily reflect the perspectives of the U.S. National Park Service, Parks Canada, or any other organization mentioned.

Results

The prevailing conservation paradigm for grizzlies is a coordinated regional ecosystem-scale approach to preserving habitat in large wilderness areas and limiting bear mortality (Herrero 1994; Paquet and Hackman 1995; Keiter and Locke 1996; Herrero 2005; Merrill 2005), which managers implemented in the Foothills Model Forest and Kluane National Park. Originating in the Greater Yellowstone Ecosystem (GYE) (Craighead 1977), this strategy appears vulnerable to profound failure when applied elsewhere, especially in the different social contexts I examined. Although the recovery of grizzlies in the Greater Yellowstone Ecosystem is considered a biological success story (Schwartz et al. 2006), some observers are seeing signs of emergent vulnerabilities from social causes there too (see, e.g., Primm and Murray 2005). In the FMF case, an ambitious, well-funded, and collaborative regional conservation program was unable to implement any of its research findings. The provincial government prematurely terminated the program in 2003 following a string of "bad news" findings and events. In the Yukon, recent settlement of Aboriginal land claims has created comanagement regimes for wildlife and national parks. There, comanagement partners, who had no faith in the park's extensive ecological research on grizzlies and felt that an inaccurate and inappropriate "solution" was being forced on them, effectively canceled an interjurisdictional conservation planning process for grizzly bears in the Kluane region in 2001.

Small-scale, community-based initiatives are often promoted as an alternative to such a traditional "top-down" approach to wildlife conservation (e.g., Adams and Hulme 2001; Berkes 2004),

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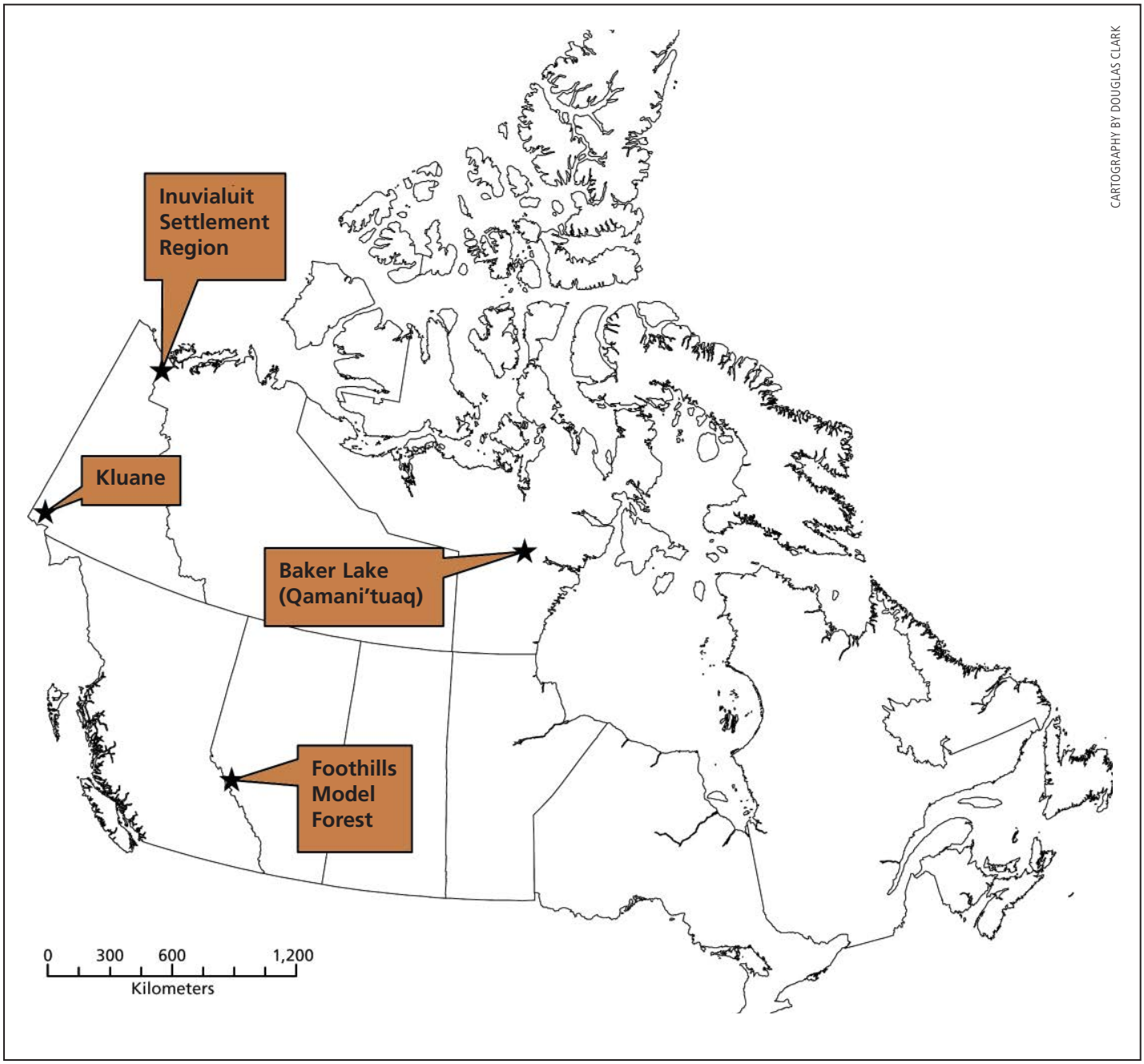

Figure 1. In order to understand conflicts that occur between management agencies and residents, this study analyzed and compared four case studies of grizzly bear management in Canada. The case study areas were (1) Foothills Model Forest, which includes Jasper National Park (Alberta); (2) southwestern Yukon Territory, which includes Kluane National Park; (3) the north slope of the Inuvialuit Settlement Region, which includes Ivvavik National Park (Northwest Territories and Yukon Territory); and (4) Baker Lake (Nunavut).

but these types of initiatives face many challenges and offer no guarantee of immediate success (Berkes 2007). For remote communities in particular, "horizontal" and "vertical" connections among institutions (Young 2002) are difficult to establish, yet are important for facilitating learning and integration of information. In Baker Lake, an abrupt increase in grizzly bear–human conflicts prompted the community's Hunters and Trappers Organization to begin a study of their traditional ecological knowledge of grizzlies (see e.g., Berkes 1999). In this way they could retain local control over responses to these conflicts, an undertaking they found challenging to complete. The Baker Lake example shows that without cross-scale connections, traditional ecological knowledge may not be effectively integrated into decision processes. In the Inuvialuit Settlement Region—where bear-human conflicts had also abruptly increased—comanagers successfully incorporated both science and traditional knowledge to reach a mutually satisfactory decision on harvest levels for grizzly bears. This outcome likely resulted largely because of their strong, cross-scale institutional network. The leadership provided by widely trusted individual champions (e.g., a biologist who had worked in the ISR since the 1970s) was also an important determinant of case study outcomes.

What do these findings mean for parks?

National parks have long had a prominent role in grizzly bear research and management in both the United States and Canada. Parks are often foci of conservation concern and grizzly bear research efforts, and as such have played an important role in their conservation. While parks have clearly functioned as refuges for grizzly populations in some areas of the lower 48 states (Mattson and Merrill 2002) and are likely to perform the same function in southern Canada given current land-use trends (Nielsen et al. 2006), the results of this study call into question aspects of the national-park approach to bear management.

At its most extreme the conventional narrative of grizzly conservation assumes all parks are protected core habitats for grizzlies, despite the fact that most western Canadian national parks inhabited by grizzlies contain little productive bear habitat and are mainly rock and ice (Banci 1991). Even in milder interpretations, though, this narrative casts national parks as privileged geographic entities (Zimmerer 2000; Hermer 2002). Park staff can unconsciously adopt this mindset and by so doing create considerable resentment among their neighbors. Outcomes in Kluane, where citizens demanded that the park withdraw from the regional grizzly conservation planning process, demonstrate the kind of negative effects such resentment can generate.

Quite a different approach was apparent in the FMF case, where Jasper National Park, a partner in the Regional Carnivore Management Group, heavily funded the model forest's bear research and invested considerable staff time and effort in negotiating a federal-provincial strategic framework for cooperation in grizzly conservation, a document unique in Canada. With the exception of the research, these programs have been terminated and the park's interests in regional grizzly bear conservation have been poorly served. Interestingly, Jasper's substantial regional grizzly conservation efforts were also quite distinct from its own internal bear management program. Operated by different staff, internal program units tended to function independently of one another. Greater integration of internal park operations and regional outreach initiatives would probably be beneficial.

Despite these discouraging outcomes, most Albertans appear to want Parks Canada to remain the primary participant in grizzly bear management (Stumpf-Allen et al. 2004). However, no mechanism exists to translate such public support into policy. Stumpf-Allen et al. (2004) conclude that "public involvement in grizzly bear management in the [Foothills Model Forest] should include processes that foster discussion and deliberation of values and preferences and that result in the public having a meaningful impact on decision-making." These results suggest the public would support Jasper National Park in taking a more aggressive favorable stance toward grizzly bear conservation efforts. Such a stance could include championing the development of some form of regional public involvement process.

In general, the most productive course probably lies somewhere between these observed extremes of pursuing park conservation goals without broader regional support and forming overly optimistic partnerships with institutions having very different goals and whose advantages are embedded in the very design of the collaborative processes. Nevertheless, constructive change is possible, even in seemingly intractable situations. For example, just as my data collection was ending in 2005, Parks Canada hired a new trainee superintendent from the Champagne and Aishihik First Nations and paired him with an experienced senior superintendent for a two-year training period. Under this new leadership, Kluane National Park has made significant advances in breaking down barriers and rebuilding institutional relationships. Tensions in the region's wildlife management system have eased enough that by late 2007 a careful dialogue about grizzly conservation had resumed.

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