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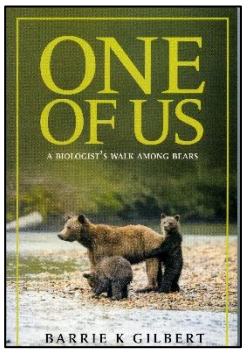
Book Reviews

One of Us
A Biologist's walk among bears

by Barrie K. Gilbert – 2019

Friesen Press, Victoria, British Columbia, V8V 3K2, Canada

The Wisdom of Bears and the Perfidy of Bureaucracy



One of the first cognitive ethologists to study bears was Barrie Gilbert, as detailed in his 2019 memoir *One of Us: A Biologist's Walk Among Bears*. It recounts his experiences researching black and grizzly bears in Yosemite, Yellowstone and Katmai National Parks, beginning in the 1970s when a grizzly tore off half his face. Gilbert focuses on how the primate-level intelligence of bears has allowed them to innovatively adapt to challenges of the natural world and coexistence with humans. However, Gilbert also exposes the bureaucratic, political and public relations hurdles involved in minimizing conflicts between humans and bears.

Gilbert and his students were among the first biologists to apply the developing science of cognitive ethology to understanding and solving human-wildlife conflicts. It was also Gilbert who invented (but did not patent) the bear-resistant plastic food barrels which have become so popular among hikers and campers throughout bear habitat.

Dealing with food-conditioned bears is just the start of his discussion on bear cognition and cultural transmission of information on where, when, and how to obtain food. Bears commonly live on a wide variety of foods which are only seasonally abundant, often in widely-scattered locations, including sea bird colonies situated at sea some 50 km from the shore in Alaska. Bears cannot get by with a single technique to catch fish. Seasonal and geographic variations in fishing conditions may force them to employ several styles. Individuals may develop their own idiosyncratic styles, which are sometimes passed along to their cubs through observational learning. Finally, there is evidence that bears self-medicate, for instance to flush parasites from their intestines.

Just as bear traditions can perpetuate actions and attitudes that conflict with humans, they can perpetuate behaviours which allow them to adapt to their natural environment and to coexistence with humans – as has also been documented in other mammals, including elephants and cetaceans (Gilbert's first research experience was with dolphins). As I argued for a long time as a marine ecologist, genetic diversity is not enough for animals to adapt to variable environmental conditions. Wildlife stewards should also strive to conserve adaptive cultural traits and the social behaviours that foster cultural adaptability. As is now widely recognized among evolutionary biologists, cultural adaptations can select for supportive genetic adaptations.

Difficulties of managing bears without killing them are compounded by (a) conflicting bureaucratic siege mentalities which see any challenge to status quo policies as a challenge to their authority and credibility; (b) political pressure from businesses – e.g., park concessionaires, lodges, air taxi companies – which grow fat off profits from park visitation, and are less concerned with long-term sustainability than with maximizing short-term gains; and (c) pressure from the public to use national parks for watching wildlife, mountain biking, fishing, hiking, and a diversity of other activities which sometimes conflict with the National Park Service (NPS) Organic Act mandate to conserve natural conditions. Gilbert recounts a diversity of other problems arising from administrators deliberately ignoring the advice

of biologists in order to accommodate politically powerful businesses and user groups. This is nowhere more obvious than in continued development of visitor facilities in prime bear habitat, despite its impacts on bears and bear-human coexistence.

Gilbert long ago concluded that NPS administrators needed strong public support if they were to fulfill their Organic Act conservation mandate, even where doing so required making politically incorrect decisions. In an effort to counter pressures from businesses and user groups unconcerned about long-term ecosystem sustainability, Gilbert has allied himself with fellow biologists (e.g., Rachel Mazur, David Mattson, Brian Horejsi and myself), as well as activists such as Louisa Willcox and Doug Peacock who make sure that valid scientific findings are not tucked under the rug, obscured by pseudoscience, or ignored. For this, he has paid a very heavy price, both personally and professionally. Despite being mauled by bureaucrats even more severely than by a grizzly bear, Gilbert has but never been beaten or broken, and he never bowed nor surrendered. His life and work will hopefully inspire a new generation of eco-activists and conservation biologists.

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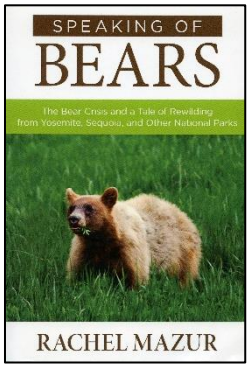
Speaking of Bears: The Bear Crisis and a Tale of Rewilding from Yosemite, Sequoia and Other National Parks

by Rachel Mazur– 2015
FalconGuides, Helena, Motana, USA

Battles of Wits: Managing Bears in National Parks



The challenge of bear management in USA national parks represents an ongoing battle of wits between humans and bears, animals whose intelligence is on a par with that of primates – at least in this arena.

This battle is highlighted by the studies of cognitive ethologist Rachel Mazur, as detailed in her journal papers and in her highly informative and engrossing book: *Speaking of Bears: The Bear Crisis and a Tale of Rewilding from Yosemite, Sequoia and Other National Parks.* Although Mazur has extensive firsthand experience with these issues, her book is not a personal memoir but a journalistic-style expose filled with testimony by many of the people she interviewed. Her book chronicles the history of black bear management in California's Sierra Mountain National Parks: (a) it focuses on how the intelligence of black bears has allowed them to innovatively adapt to challenges of the natural world and of coexistence with humans; (b) it explains how ursid intelligence creates conflicts with humans and outwits our attempts to curb those conflicts; and (c) it also exposes the bureaucratic, political and public relations hurdles involved in minimizing conflicts.

Starting in the late 1960s, the National Park Service (NPS) at Yellowstone National Park (YNP) killed several hundred grizzly and black bears which were food-conditioned and/or habituated to people. Not only was this not made public, but it was hidden. During that era, I reported to YNP's chief scientist the discovery of numerous dead bears in secluded locations inside the Park -- naively assuming that she must not know of them since those deaths didn't show up in publically-available official reports on bear mortalities. Her response was angry denial. Yet the ursid holocaust was soon confirmed to me by Lon Garrison, retired Superintendent at YNP, and later by Jack Dean, fisheries biologist at YNP, as well as by John Craighead's investigations. Over the intervening decades, I saw the NPS dishonesty as a serious black mark on the agency. That was only compounded when I learned that hundreds more bears were being killed at other national parks.

Mazur's book provides further evidence for those ursid executions; yet it also softens my criticism of NPS for hiding them from the public. Little had I realized NPS's "no win" dilemma, because no matter which solutions they implemented, some interest group objected strongly. At some point, public disclosure and justifying each decision becomes less important than getting the job done. Better to ask forgiveness than permission.

That might justify avoiding public disclosure while drastic action is taken. But it does not justify continuing to hide these facts in perpetuity, either by not admitting how many bears were killed, or by averaging the number killed during peak periods with those killed in other years, so that the peaks are hidden. Nor does expediency justify long term reliance on the short-term quick fix of just killing conflict bears, without also investing more heavily in long-term solutions which cure the underlying causes. Mazur's book details the tremendous efforts invested by herself and other NPS biologists and stewards in trying to minimize conflicts without killing bears.

In Yellowstone, Yosemite, and a number of other national parks, garbage was initially deposited in open pits where the refuse was consumed by bears. Although dump-foraging conflicted with the NPS mandate to maintain the natural ecology and behaviour of its wildlife, NPS initially lacked sufficient funding to dispose of garbage where it was inaccessible to bears. Worse, such a change was opposed by people who enjoyed watching bears at dumps. However, even with ranger supervision, some people were injured, if not due to bear aggression, then due to bear defensiveness when people provoked them, for instance by crowding close for photos. Finally, in the interests of public safety and forcing bears to forage naturally, the dumps in each park were closed to bears. As predicted by pioneering grizzly bear researchers John and Frank Craighead, bears vastly increased their foraging in campgrounds, consuming garbage from trash barrels and raiding campsites. This markedly intensified bear-human confrontations, human injury rates, and public criticism of NPS actions.

NPS adapted by pioneering new policies and technologies to keep bears from obtaining anthropogenic food in developed areas of the parks. The better these succeeded, the more that food-conditioned bears shifted their depredations to back-country sites. No matter how much effort NPS invested in eliminating bear access to anthropogenic food, there were always at least a few people who accidentally or carelessly allowed bears to get their food. Worse, gifted with primate-level intelligence, some bears figured out new ways to "hack the system," for instance to reach food stored inside automobiles, or to ambush people to snatch their food before or after it was stored securely. Not only were bears clever and innovative, but they learned from one another, especially from family members, as was carefully documented by Mazur's cognitive ethology research. Even various forms of aversive conditioning do not stop some bears from seeking anthropogenic food – even the tiny bits of food in discarded dishwater. The only way to stop this misbehaviour seemed to be killing food-conditioned bears so that they could not continue misbehaving or "infecting" other bears, and to prevent new bears from becoming food-conditioned. Regrettably, executing the right conflict bears seemed essential to minimizing propagation of misbehaviour. Yosemite bears that venture into developed areas are now captured and fitted with a radio transmitter which reveals any attempt by the bears to return a conflict zone, in which case the bears are met in person and evicted.

One can only hope that Mazur's book will (a) help motivate administrators to better abide by the professional advice of their biologists; and (b) promote greater use of the theories and techniques of cognitive ethology to manage bears, so that the keen learning abilities of these animals can be exploited to promote interspecies harmony rather than conflict.

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