

The Brown Bears of Kenai: A Population at Risk

To most people, Alaska symbolizes the very essence of wilderness and the last stronghold for species like wolves (*Canis lupus*) and brown bears (*Ursus arctos*). Unfortunately, like the rest of the world, Alaska's wilderness is showing signs of stress. For example, brown bears on Alaska's Kenai Peninsula have become a "population at risk." A variety of factors have contributed to this growing problem, prompting scientists to raise a warning flag for brown bears within the Kenai ecosystem. Clearly there is cause for concern, but there are also reasonable solutions to this problem if we act swiftly and responsibly.

The brown bear population on the Kenai Peninsula is estimated at 250-300 bears. This small population is geographically isolated from the rest of Alaska. This "island" population is not unlike that in the Yellowstone Ecosystem, where grizzlies have been listed for decades as threatened. Although the Kenai is about 9,000 square miles (23,000 square kilometers) in size, brown bears are regularly distributed over less than half the area. The Kenai Peninsula is connected to the Alaska mainland by a narrow 9-mile (14-km) wide isthmus between Cook Inlet and Prince William Sound. Human activity in this narrow corridor likely restricts movements of bears between the Kenai and mainland Alaska. A research model developed for the Chugach National Forest portion of the Kenai Peninsula estimated that habitat effectiveness for brown bears has already been reduced by approximately 70 percent due to the cumulative effects of human activities.

Brown bears have the lowest reproductive rate of any land mammal in North America. For example, most females don't breed until they are 5 or 6 years old, their average litter is 2 cubs, the interval between litters is 3 to 4 years, and half the cubs may die during their first year. Consequently, brown bear populations cannot sustain high mortality pressures. Expanding human activities across the Kenai will increase bear-human contact, inevitably resulting in the direct mortality of bears through legal hunting, kills in defense of life and property, and illegal killing. Kills in defense of life and property have already doubled on the Kenai over the past decade, and the fall hunting season has been closed for the last 4 years because further losses would not be sustainable.

The Kenai Peninsula is one of Alaska's most developed and fastest growing regions. For example, the human population has more than doubled in the past two decades. Connected by road to Anchorage, the largest city in Alaska, the Kenai is the focal area for many of the State's outdoor recreationists and an important visitor destination for a growing tourism industry. Logging, mining, oil and gas development, land subdivision, and other developments also are increasing throughout the Kenai Peninsula. The spruce bark beetle infestation and the call for extensive salvage logging (and road construction) could exacerbate these developments. All these activities increase opportunities for bear-human encounters, and their cumulative impacts on habitat are of particular concern to wildlife managers in Alaska.

Roads and habitat fragmentation (breaking habitats into smaller, more isolated blocks) are the most significant threats to the conservation of bears because they increase human access and bear mortality. Expanded road construction in the back country, along with all of the other developments and activity on the Kenai, will significantly increase the vulnerability of this small, isolated population. A single, isolated development may not be a significant impact, but it would be an incremental step toward a declining bear population.

Alaska's Kenai Peninsula is clearly showing signs of ecosystem stress, and the brown bear is a key indicator of that stress. Rather than managing in a piecemeal fashion one project at a time, we must take a comprehensive view of this population, beyond agency boundaries, and establish realistic guidelines for resource and recreational development projects. In the mid-1980's, the Alaska Department of Fish and Game, Fish and Wildlife Service, Forest Service, and National Park Service convened an Interagency Brown Bear Study Team (IBBST) to monitor and research brown bears on the Kenai Peninsula. Last year, as a result of concerns over increased salvage logging and road building, the Governor requested the agencies to develop a comprehensive conservation strategy for Kenai brown bears. This plan will include a closer assessment of the Kenai bear population and address the long-term cumulative effects on habitat from continued development.

The time to address the Kenai brown bear problem with a proactive, cost-effective conservation strategy is now. If we wait until later, we may be forced into costly, reactive management to restore a healthy population. To this end, the IBBST and several Alaska conservation groups requested that the Department of Fish and Game designate the Kenai brown bear population an Alaska Species of Special Concern. The Department announced that designation in November 1998, with the objective of

preventative conservation now to forestall a serious crisis in the future.

Securing a future for the Kenai brown bear will become more difficult as development pressures intensify. However, by taking positive actions now, we have reason for optimism. It will not be easy, but with a committed effort, sound science, and collaborative partnerships, we can make conservation work for everyone. Alaska's biological resources represent our greatest sustainable wealth, and conserving brown bears while maintaining the Kenai's ecological integrity is a sound economic and environmental investment. Our ability to bring people together to solve the Kenai brown bear problem will also serve as a positive model for solving other conservation problems elsewhere in Alaska.

Dr. John W. Schoen is the Executive Director of the Alaska Office of the National Audubon Society. Formerly, he worked for 20 years for the Alaska Department of Fish and Game, including 10 years as a brown bear research biologist. He also serves as an Affiliate Professor of Wildlife Biology at the University of Alaska.

Two radio collars from collared brown bears were found tossed into local water bodies. Unreported shootings of Kenai brown bears in addition to reported mortalities increase human impacts, but the biggest threat to Kenai brown bears is piecemeal destruction of their habitat.