

When Moose Move In

By Sean Neilson



Fish and Game biologist Kevin White stalks a moose near Gustavus in hopes of putting a radio collar on the animal. By electronically monitoring the animals' movements White and his colleagues gain information to help manage the herd.

The tiny town of Gustavus wrestles with an invasion of ungulates

The air fills with bullets. Armed officers patrol the boundary. Aircraft assess the ongoing situation. A quote from the local media reads, "Twenty were shot on the first day."

This may sound like a description of a war zone, but it's actually the Juneau Empire's account the 2004 fall moose hunt in tiny Gustavus.

Located on Icy Strait about 50 miles west of Juneau, Gustavus is tucked in a pocket along Glacier Bay National Park's southern boundary. It sits on land left exposed by the fastest recorded glacial retreat in the world. Places covered until recently with ice thousands of feet thick are now the domain of mountain goat, mallard and moose. A lot of moose.

In a few decades, the moose population has exploded from just a handful to nearly 500. Moose now outnumber Gustavus residents 2-to-1, and residents of this bush community are working with the Alaska Department of Fish and Game to learn how to manage this dynamic population of ungulates. The relationship is not without controversy.

A Landscape of Life

Gustavus and the greater Glacier Bay area constitute a landscape of life. Towering spruce forests surround a mosaic of meadows providing habitat to more than just moose. Bear, wolf and wolverine wander back and forth from beach to forest. Peregrine falcons prey upon snow buntings. Migrating sandhill cranes stop over by the hundreds. Wildflowers erupt every spring. This profusion of life is impressive, but it's even more remarkable when one considers that only 250 years ago the entire area lay beneath a blanket of ice.

When a globally cool period known as “the little ice age” ended about 1750, the area’s massive glaciers began a dramatic retreat of 65 miles. From the clues left behind, scientists have pieced together the area’s natural history. As the glaciers melted, major drainages created an expansive alluvial fan with the sediments that had been locked up in the ice. This fan formed a triangle approximately 8 miles wide by 10 miles long—the site of present-day Gustavus.

As ice receded up the bay, it left behind scoured bedrock, and piles of rock and rubble that provided footholds for lichens and mosses. Those plants stabilized the scattered sediments, and then other hearty, pioneering plants took root, establishing the beginnings of a soil base that could support trees and shrubs such as alder, cottonwood and willow.

The establishment of willow is where moose begin to enter the picture. By the early 1930s, Adams Inlet (an arm of Glacier Bay) was free of ice, and willow, the preferred food of moose, became abundant. Willow proliferated in Gustavus as well. The stage for moose was set.

“Moose began to colonize the area in the early- to mid-20th century,” said ADF&G biologist Kevin White. What they found was moose nirvana: an abundant supply of willow, little competition and few predators.

One of the first people to document moose in the area was Bruce Paige, Glacier Bay’s chief of interpretation in 1968. Based on some of his early surveys, he recalled how those first moose behaved. “In the summer it was a real bonanza for them. But in the winter the snows were so deep that it was pretty formidable for them. To the best of my knowledge, most of them didn’t make it, or they moved out of the area.”

Eventually the moose did make it, and now they constitute one of the densest herds in the state—exceeding 12 animals per square mile during the winter, White said.

By 1998 Gustavus residents were calling the state to complain about dogs being kicked and gardens being mowed down. Managers quickly recognized that the problem could grow well beyond Fido and sugar snap peas.

ADF&G wildlife-management biologist Neil Barten oversees game management from Petersburg to Yakutat. In 1998 he flew the first aerial survey of moose in the Gustavus area and counted 185 animals. He found himself with too many moose, rather than too few. “This quickly became my No. 1 management concern,” he said.

Barten was concerned about what would happen if a heavy winter hit while 500 or 600 animals were in the region. His fear? A population crash. The scenario would see moose move into rich, virgin habitat and flourish. They would deplete all of their preferred forage. The harsh winter would set in and hundreds would die of starvation. Afterward, the habitat would be so degraded that the survivors would persist only at relatively low levels.

Barten's problem is unusual. Throughout most of the state, managers struggle with shrinking moose populations. In places such as McGrath, biologists use controversial predator-control programs to reduce predation. Typically, this means aerial shooting of wolves but, in 2005, for the first time ever, ADF&G issued permits to bait grizzly bears near Tok in an effort to boost moose numbers.

Unlike Tok and McGrath, predation is not occurring in Gustavus, despite the presence of wolves and bears. "We don't really know for sure why there isn't more predation," said White. "We've documented very little evidence of it."

Wolves and bears usually keep moose populations in check, but in Gustavus, according to Barten, "the only mortality is from us."

The absence of natural predation leaves ADF&G with only one tool—human hunters—to achieve its management objective. "Our ultimate goal is to find the equilibrium point at which this herd can be maintained, and then try to keep it there," said Barten. This philosophy stems from the state's constitution, which mandates a "sustained yield" approach. It is meant to get the most meat into the most freezers for the most years.

Some residents take issue with that mandate. "It's one thing if a crash happens naturally," said resident and hunter Nat Drumheller. "But when you step in and start influencing it to keep the population high on purpose, then that's not OK." He prefers the policy that adjacent Glacier Bay National Park espouses, where nature is allowed to take its course. "Natural regulation," as it is called, views population fluctuations as neither good nor bad, but just part of nature's ebb and flow. The dichotomy of management objectives is not lost on residents like Drumheller, who characterizes ADF&G's mandate as an attempt to, "turn Gustavus into a moose farm."

Some feel that ADF&G's efforts won't be able to match natural forces. "Regardless of the number of moose that are taken during the hunting season, they're not really going to be able to control the population," Paige said. "It's going to be the weather or changes in the vegetation that will be the bottom line for the moose population. It won't be the hunting season."

Regardless, the population may be doomed to collapse, Barten said. "We may be behind it to where we can't catch up but, then again, we may be able to do something about it." At a town meeting, Barten stressed that, "Right now our biggest enemy is too many moose."

Some residents are unconvinced. Bill White questions Barten's decision to hunt cows. "It sounds like an awful lot of cows are being taken," said White. "You take too many and you're wiping out a herd. I've always been against the cow hunt."

Some of the skepticism is based on cow hunts that took place in the late 1960s in Haines and Yakutat where moose populations crashed.

Retired U.S. Forest Service biologist Mike Perensovich, who conducted field research in Yakutat from 1960 to 1981, said, “I always thought that the real reasons for those declines were easy access to the moose and tough weather.” Perensovich acknowledged that, despite these factors, “there was a segment of people that still blamed Fish and Game managers.”

Or as retired ADF&G biologist Bruce Denniford put it, “Hunters are at least skeptical of, if not opposed to, cow hunts.”

Safety Issues

While Gustavus’ moose boom has delighted out-of-town hunters, it has caused grief for some locals struggling to maintain their quiet lifestyle. “It’s a play place for them,” said Jim Wagner. “Yet it’s a living place for us.” Wagner, a longtime hunter and Gustavus resident, also serves on the local advisory committee that makes recommendations to the state.

With as many as 170 hunters on the ground on opening day, safety is an issue. Glacier Bay’s district ranger Gus Martinez patrols the park’s busy boundary during the hunt. “My biggest concern is public safety,” Martinez said. “At some point in the near future somebody’s going to get hurt. They’re going to get shot or there’s going to be a fight out there over territory.”

Part of what draws so many to hunt Gustavus is the relative ease with which a moose can be taken. “You can practically drive right up to where the moose are,” said Naomi Hobbs, a hunter from Juneau. “We shot the moose just before 8 a.m. and we had it in the back of the truck by 9:30. I didn’t imagine it would be quite so easy.”

Last fall’s hunt took 43 bulls in only three days—it’s no surprise locals refer to it as “The Derby.”

Scientific Management

Nearly four decades after moose arrived in Gustavus, ADF&G has a wealth of scientific data on moose in general, and on the local herd and habitat in particular. They’ve made significant changes to avoid, as Barten put it, “a hunt that nobody was happy with.” Based on his research, Barten has recommended that 40 to 45 bulls and up to 90 cows be taken in this year’s hunt.

As with all compromises, some people may be disappointed. “There are people that stake out the extremes,” said biologist/geologist and 40-year Gustavus resident Greg Streveler, “but I think the center of gravity is definitely towards active management.” He believes the moose are doing the same thing in Gustavus that the people may do. “They’re taking the natural productivity that’s been accruing since the retreat of the ice and exploiting it, probably beyond its capacity. Eventually we’ll probably do what the moose are doing—overshoot its limits.”

By applying the science, Barten hopes that the Gustavus cow hunt will successfully regulate the population. “I’m willing to go with the best data that we have and make the decisions based on it,” he said. “If that means we get blamed for something down the road—fine. I’m sure as heck not going to turn around from our data.”

Sean Neilson, a resident of Gustavus, is a free-lance writer and photographer. More of his work can be seen at www.seanneilson.com.