

Pelican Valley & Mollie's Pack

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Unlike the northern range, wolf work in the interior can be tough. So tough, it was originally envisioned as aerial monitoring only, which is how most wolf studies accomplish the task of remote study. Bob Garrott and his team had successfully mastered ground data collection in the Madison-Firehole river drainages, but work elsewhere seemed infeasible. Most of these other locations were far from roads.

Then in 1998, the idea of working in Pelican Valley came up—a long famous place and what some would call the “heart” of Yellowstone. Situated in the middle of the park and vital to much wildlife, it certainly fits. A pack of wolves lived there, named Mollie’s pack (after the late Director of the U.S. Fish and Wildlife Service who held her ground on wolf reintroduction despite criticism), and they seemed unique. Initially there were many hurdles to overcome; one was the uncertainty of success and, perhaps more importantly, some significant safety issues. The plan would entail camping out for two weeks in winter without a shelter and observing from a high point above the valley or an observation point (OP). Before that though, the first task was to see if the wolves were even in the valley enough to make observation worthwhile. A quick plotting of radio locations revealed wolves were in the valley a significant portion of the time, especially in late winter. We decided we might just have a project!

Clearing this new research with rangers and administrators took time. The administration’s desire was for us to use Pelican Springs cabin, but if we did we would not be able to see the valley. A daily ski across the valley would

disturb any wildlife we wished to observe. The decision was made to camp at the OP above the valley and stay put—no wildlife disturbance. In 1999, with scant winter equipment, we did just that. It proved to be a wise decision.

Once the hardship and struggle of hauling two weeks of gear across Pelican Valley was accomplished, with subpar equipment (especially sleds) and up a large hill, major scientific insights followed. At first we just watched and gathered behavioral data. Quickly, we realized there were few elk, and later no elk due to the harsh environment, so Mollie’s pack wolves had adapted to eating only bison in the winter.

Quickly the story became about wolves and bison. Formidable prey compared to elk, killing bison presented a different challenge to the wolves. Several bison kills were witnessed, and a few were filmed, wetting the appetite to learn more and how their strategy differed from killing elk. Bison commonly stand their ground, whereas elk commonly flee—a major difference we noticed right away. Wolves facing a 1,000-2,000 pound animal presented a unique set of problems; taking the bison head on was out of the question. Wolves would have to work the environment to their advantage. Watching and waiting for the right moment to attack was critical. Wolves seem to have all the time in the world, so they were never in a hurry and waited. When they decided to attack, they chipped away: attack, wound, and wait; attack, wound, and wait...Using this strategy, some kills took up to nine hours. The wolves also had to use terrain to their advantage. Wind-blown



hills had no snow and the bison favored such terrain for better footing; between the hills were troughs that collected snow, so the wolves favored these areas for attack as the snow hampered bison defense.

Confrontation between bison and wolves was stunning to watch; rarely observed nature in action. Pressuring bison for hours, wolves gradually drove them into deep snow and then jumped on them, many wolves at times, hanging from muscle and hide by their teeth. Once on firm ground, the bison shook the wolves off like water droplets, finally swinging their horns at them. Seemingly undeterred, the wolves waited for their next chance, or inexplicably left the bison, sensing an unseen cue or sign that made them abandon the effort.

At times, persistence paid off and a kill was made. But then another problem cropped up: who gets the spoils? This time of year a large bison carcass is a food bonanza. Every critter far and wide came in to grab what they could: weasels, foxes, coyotes, ravens, eagles, magpies, and grizzly bears. Once bears arrived it was over for the wolves. The carcass now belonged to them. Virtually every documented carcass in Pelican Valley from March through October attracted grizzly bears. It was not a matter of if but when, and the wolves had to grab as much meat as they could before the bears moved in. Up to 24 bears have been observed on one wolf kill at the same time. In March during our study, these carcasses became small “eco-centers” and most of the action in the valley occurred here.

Through time, our science became more sophisticated with fixed locations to observe from at regular intervals throughout the day, in addition to opportunistic observation of behavioral interactions. These observations indicated bison organized themselves differently when wolves were present in the valley versus when they were gone. Bison stayed closer to areas of good footing when wolves were around, and straying into riskier areas to forage when wolves were absent. Eventually the bison cow/calf groups left, probably because of wolf pressure, leaving about 40-80 hardy bulls for the wolves to deal with. So the valley changed, but in a vigorous way, and in fact gained some with the addition of wolves as they provided the carcasses that life hinged on in late winter.

Of course, we changed too. We purchased better equipment, especially sleds and light teepees that made living there for two weeks tolerable. We also dug into the snow and made caves to sleep in, and other years cut snow blocks with a saw to make an igloo. Crawling in either shelter, you could escape the near-constant roar of the wind or at night be oblivious to a foot of overnight snow that collapsed tents. For 16 straight years we managed the storms and wind that made Pelican Valley famous; and like with all things, we told stories, building memories that grew into a fondness for the place. After these years of study, it was felt our objectives had been achieved, so we turned things back to the valley, to the animals and plants that endure this harshness in the heart of Yellowstone.