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**The effects of thousands of impoverished trappers and wolf bounties in northern Alberta early in the 20th century on predators, and its relation to the myth of the harmless wolf.**

Dear Colleagues,

I am – again – the bearer of bad tidings, and I can assure you that I do not want to be that.

I have been digging into historical literature in my quest to understand why in North America the myth of the “harmless wolf” took such a such a severe hold, to the point of perverting scholarship and quite probably leading to the death of some believers. The conventional view of the harmless wolf, which I also believed in throughout my academic career and four years into retirement, is in sharp contrast to experiences elsewhere. Yet, it certainly coincided with my personal experience pre-1999 when a misbehaving pack of wolves settled about our and our neighbor's properties at the edge of a farming district in central Vancouver Island. I subsequently discovered that the wolves were much the same in their behavior, whatever their origins, but that circumstances lead to vastly different outcomes. In general, the evidence indicates that wolves are very careful to choose the most nutritious food source easiest obtained without danger. They tackle dangerous prey only when they run out of non dangerous prey, and they shift to new prey only very gradually, following a long period of gradual exploration. Wolves are very sensitive to strangeness, including a potential prey species strange to them. Garbage is the easiest and safest food source for wolves, and they do take advantage of such. Once they are habituated to people due to their proximity, they may begin to investigate people. The ultimate exploration of a strange prey by a carnivore is to attack such. Consequently, the danger from habituated wolves. However, they need not have garbage, just a shortage of prey to begin investigating and eventually attacking humans. This means that as long as wolves have sufficient natural prey, they leave livestock alone. As long as they have livestock they leave humans alone. When short of natural prey and livestock they turn their attention to humans and their habitations and may even break into such to extract cattle, horses, pigs, sheep or poultry. Dogs and cats are attacked before that. We humans are next in line, primarily children. But even then the initial attacks are exploratory in nature and clumsy, allowing some victims to escape. However, this scenario is of exceptional scarcity in North America, though it is practiced occasionally by coyotes targeting children in urban parks.

The discrepancy, however, between global and conventional American experiences with wolves is crass. Wolves have killed thousands upon thousands of people as chronicled by European and Asian sources, yet in North America fatal attacks are few and disputed. The differences are real. What then was going on in the past century in North America to make wolves so harmless? I felt I had obtained part of the answer that showed that wolves are wolves wherever they occur, but that circumstances can generate very different outcomes in wolf behavior.

I continued digging.

In a teleconference with a committee of the Montana legislature on or about April 27<sup>th</sup> I suggested that in Canada trapping and official wolf control via hired predator control officers was likely a good part of the answer. I ran subsequently into most unlikely sources, plus follow-ups. These are the memoirs of two German authors, the first is the two volume work of Max Hinsche (1935) *Kanada wirklich erlebt*

(Canada really experienced) and Reinhold Eben Ebnau (1953) *Goldgelbeds Herbstlaub* (Golden yellow fall leaves). In addition I examined C. Gordon Hewit's (1921) *The Conservation of the Wildlife of Canada*, and followed up with some reading by a like-minded and qualified author on Russian and Siberian conditions Egon Freiherr von Kapherr (1941) *Wo es trommelt und röhrt* (Where [wildlife] drums and roars).

Max Hinsche arrived in Canada in 1926 and became trapper and collector of wildlife. He was a taxidermist by trade. He spent eight years on the Athabaska River in Northern Alberta, but traveled for a year in the then unexplored Yukon before returning to Germany in 1935. He wrote his memoirs in two volumes, and died shortly thereafter. He arrived virtually destitute in Canada, and rumor has it he fled the law. When he returned with a significant collection for the Dresden Natural History Museum, somehow, all was forgiven, and his books made him for a short time a hero. Hinsche is an excellent, vivid writer, and a close, careful, objective observer. His is far and beyond the best account of how trappers lived in Northern Alberta 1926-1935. He illustrates a community of desperately poor, hard struggling men who at great danger to themselves trapped for a meager grubstake in winter. In summer they were employed as laborers, which earned them just enough to go once again trapping. Most held down a trap line alone, some lived in pairs, however, all were united in a web of mutual support and code of conduct. It is evident that there were many such poor trappers as Hinsche met them on the Athabaska going to and fro to his trap lines. After a first dreadful year in which Hinsche and a companion of his almost starved to death, Hinsche set up a routine that made him reasonably successful and allowed him some museum collecting. He was out virtually day and night and experienced especially Canadian winter conditions in their full severity.

What was Hinsche's views on wildlife and wolves? When he came in 1926 moose were scarce, but increased and were abundant when he left in 1935. Mule deer were abundant throughout. Wolves were present, but not common and Hinsche in eight years had only one serious run-in with a wolf pack. However, that run in, described in exquisite detail, is classic. A pack confronted him as he trespassed into an area where they had killed three moose and three deer. Hinsche pointing out that he had only four shells in his rifle, backed out without shooting and reached his cabin safely. (A Saskatchewan friend of mine did exactly the same thing opposing seven very pushy wolves with five cartridges in his rifle's magazine and chamber). Hinsche counted 18 wolf beds in the snow the following day.

Hinsche of course trapped a few wolves along with other fur-bearers. His significance resides in his detailed account of the attitude of trappers towards wolves due to the problems wolves cause them. He points out that when wolves arrive in a trappers area, they first of all spook off the big game which the trappers rely on for food. These desperately poor men and their few dogs relied almost entirely on big game for food to come through the long winter, and when wolves emptied the land of moose and deer the trappers could be in serious difficulty. As we learn later in detail from Eben-Ebenau, keeping meat safe for personal use was not easy, as some bears managed to get at cached meat, which meant that the trapper had to disrupt trap line work and go hunting once again. Finding no wildlife to hunt was thus a very serious concern for a trapper. Secondly, wolves notoriously followed trappers, and destroyed the catch in the traps. This was a serious financial loss to already very poor men, especially if wolves destroyed a high value fur such as lynx, marten, mink or cross fox. Thirdly, wolves could destroy sled dogs, another economic blow. (And I must add that there are also incidents of a wolf or more attacking a trapper and/or his sled dog team as told to me by native trappers, though neither Hinsche nor Eben-Ebenau mention such). Consequently, and understandably, trapper sought to rid themselves of wolves. Wolf fur was of no particular value. However, with a bounty added, there was incentive to trap wolves. One advantage of the bounty system was that only the scalp had to be handed in to receive the money. Consequently, one only needed the scalp, and one could save oneself the trouble of skinning, preparing

and transporting the bulky wolf fur.

Hinsche makes a point that while poison on the trap line was outlawed in 1922, trappers continued to use it on wolves as they could - with some luck - eliminate a wolf pack in one setting, whereas with leg-hold traps they could only catch one or two wolves at best leaving the survivors to continue with their mischief. Eben-Ebenau makes much the same point, but with snares, which were also outlawed though the prohibition was largely ignored by trappers. A well-set series of snares could catch most of a pack, and kill the caught wolves quickly. Ebenau was a very skilled in setting snares for wolves, and caught or shot many more wolves than the average trapper. Moreover, leg-hold traps large enough to securely hold a wolf had to be fairly large, heavy and bulky which would be added work for the already stressed out trapper. Traps were set along trap lines that were up to a hundred miles long and carrying traps such distances was hard work. Dog teams were not always at hand. After all, game had to be shot for the dogs, or fish caught and dried and transported to the distant line cabins. And then there was the serious problem of bears breaking into trapper cabins and caches. There was thus incentive to not only remove wolves but bears as well. And that, we can safely expect had a positive impact on the survival of fawns and calves of deer, moose and woodland caribou.

Eben-Ebenau, who came to Canada in 1929, and to north-western Alberta in 1931, describes matters up to 1951. He was a German blue blood, an educated man with an insatiable thirst for hunting. An excellent writer, he was a hard-nosed, very skeptical man who hunted down hard facts with determination. That's why he records not only the life of trappers quite similar to Hinsche, and social circumstances far superior to the latter, but of interest from current perspective is his accumulation of quantitative data about trappers, as well as his observations of the behavior of wolves. We therefore know how many trappers there were in northern Alberta, how many wolves they killed, how high was the bounty and how much was paid out. Next: Eben-Ebenau was so excellent an observer of wildlife, that I made use of his observations in synthesizing the biology of moose in my books 1998 *Deer of the World* and 1999 *Moose*. Eben-Ebenau remained well connected to Germany as he provided a first rate exhibition of Canadian moose trophies to the 1937 hunting exhibition in Berlin. He maintained a close contact with the natural museum there, as well as famous German personalities, which he guided or hunted with in Canada. I got to know Eben-Ebenau personally, exchanged correspondence and we visited each other. I was able to admire his 1937 collection, now displayed at his home at lesser Slave Lake, where he homesteaded. He became a well known guide and outfitter and was honored by the Province of Alberta for his conservation work. This all becomes significant in view of what Ebenau ultimately writes about wolves in northern Alberta.

### Trapper income

Max Hinsche's (p.53) and partner's 1926/27 catch amounted to one wolf, and 131 ermines for an income of \$74.05. In 1951, according to Eben-Ebenau (p.203), the average income of an Alberta trapper was \$426. Eben-Ebenau (p. 197) also intoned that he never made more than \$500 a winter. He could make twice that working as a carpenter. Clearly, the income from trapping was very low, even if the value of the dollar then was much greater than today. Hinsche's and his partner's 1926/27 expenses were not covered by the above return from trapping.

### The bounty for wolves

The bounty for wolves (Ebenau p. 214) in 1935 was \$5.00 while a wolf pelt was worth \$4.00. In 1940 the bounty rose to \$10.00. 1944 the bounty was still \$10.00, but the wolf fur fetched \$15.00. In 1948 the bounty rose to \$15.00, but the value of a wolf fur was only \$4.00. It stays like that till 1952.

Clearly, the bounty adds considerably to the value of a dead wolf and is an incentive, especially since only the scalp needs to be surrendered.

The magnitude of the wolf kill.

The registered wolf kill climbed from 165 in 1930, to 187 in 1935 when the first bounty is paid, but climbed to 1143 wolves in 1948 when the bounty reaches \$15.00. The registered wolf kill drops to 829 in 1952. The rise and fall in wolf kills by trappers roughly parallels the pre-war increase and post-war decline in moose in northern Alberta.

The number of trappers.

In 1944 there were 2668 registered trap lines, 1948 its 2839, 1950 its 2813, 1951 its 2797, in 1953 its 2654. However, there are in addition trappers licenses which are issued to homesteaders, farmers and ranchers. In 1951 there are 3127 such licenses, plus 2797 trap lines for a total of 5924 licensed trappers; the 1953 figures are similar. In addition to trappers, hunters, farmers, ranchers, game wardens as well as predator control officers also killed wolves.

The official kill of wolves is roughly one wolf caught by three trap-line owners per year. We do not know of course the total kill, including wolves not submitted for bounty payments.

Before proceeding, one must note that the apparent low wolf kill in the early 1930's takes place when wildlife is recovering from a low in earlier decades, so that trappers, concerned about their own food situation are all too eager to rid themselves of wolves. The low wolf kill thus reflects a low wolf population.

Now follow some very interesting observations by Eben-Ebenau. He points out that during the maxima of snowshoe rabbit abundance, when the countryside is saturated with rabbits (as I can attest to personally having witnessed the 1961/62 rabbit high in BC's Spazisi northern wilderness. William Rowan of the University of Alberta in Edmonton estimated some 32,000 hares per square mile; that's about 36 tons of rabbit biomass per square mile), wolves live to a large extent off rabbits. This is matched by other smaller carnivores. As rabbit abundance drops wolves switch increasingly to mule deer (as well as livestock, according to Alberta's game guardian since 1905 Mr. B. Lawton p. 109, Hewitt 1921), **at the same time wolves avoid and ignore moose**. Eben Ebenau observed packs of wolves hunting rabbit among moose while the latter keep on feeding and ignore wolves completely. Ebenau goes on to say that, in his very extensive travels he never found a moose killed by wolves. This happens in the western part of northern Alberta. Hinsche operated in the eastern-central parts. He did not see or kill many wolves, but did find a few moose kills and did find that moose avoid wolves. That matches with my observations in every region I worked in.

What arises is a picture of thousands of desperately poor men in Northern Alberta, hostile to wolves, trapping for a meager living and eliminating wolves as much as possible, especially when they get paid a bounty and only need to bring in the scalp. The magnitude of the annual wolf kill is so high that wolves can survive on the massive abundance of rabbits, with a few deer thrown in, while avoiding moose. Wolves were thus severely depleted in Alberta in an ongoing manner early in the 20<sup>th</sup> century, so much so, they avoided difficult and dangerous prey, left alone livestock, and avoided humans virtually completely. Since wolf packs favored deer, and a deer is quickly consumed, the packs did not have much opportunity to confront humans over kills.

The above suggests that the bounty paid on wolves, far from being ineffective, was very effective in lowering wolf numbers so that big game could built up. Moreover, it is only with current insights into wolf behavior that Eben-Ebenaus's observations on wolves and moose gain significance.

Moreover, with an army of desperately poor men extracting a living from the wilderness not only wolves were routinely depleted, but almost certainly, grizzly bears as well. Thousands of poor men trapping for fur were thus exercising severe predator control. However, the myth of the "harmless wolves" is grounded in more than the reality generated by severe wolf control due to commercial trapping for fur by thousands of poverty stricken trappers that could ill afford wolves close by. In addition there was systematic destruction of wolves by some native cultures in the far North, as wolves and dog teams and trapping were not compatible. In the south, meanwhile, there were predator control officers effectively eliminating wolves in farming districts. No wonder the remaining wolves were shy, weary, invisible and harmless leading to the false conclusion that this was their one and only nature, and that anything to the contrary was due to prejudice.

It's a shame that biologists, myself included, fell into that trap.

Sincerely,

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PS. The two additional books, which I did not incorporate in the above, remain nevertheless significant. C. Gordon Hewitt (1921) opens up his chapter 8, entitled "*The Enemies of Wild Life and the Control of Predatory Animals*" with the following words: "Any rational system of wild-life protection must take into account the control of predatory species of mammals and birds". Now, C. Gordon Hewitt is not just anybody. He is the father of the 1916 Migratory Bird Convention. He is one of the creators of the North American Model of Wildlife Conservation. He was a real mover and shaker not only in the Canadian Commission on Conservation (1911-1919), but also a close friend of like-minded US colleagues, such as Hornaday, Nelson, Stone, Roosevelt etc. Hewitt goes on to show the kind of problems that wolf, coyote and mountain lion predation caused to the livestock industry. The impact was ruinous and triggered very determined measures to keep predators in check. We thus get an inkling of the predation problems ranchers faces and why they were so determined to, among others, eliminate wolves. It gives a pretty good idea what ranchers have to look forward to in the west in years to come.

The book by Egon Freiherr von Kapherr about Russian and Siberian conditions as experienced, on the ground, by a very determined, passionate hunter, naturalist as well as an administrator of districts under the regime of the Zar, beginning at the turn of the century and lasting into post-revolutionary times, is also an eyeopener. Like Hewitt, so Kapherr is not just anybody. He was born a Baron, of the lesser Latvian nobility. He was a highly educated man, with a great passion for natural history. He corresponded with Teddy Roosevelt. He traveled in the horse and buggy, steamship and rail days widely in Russia, and he took every opportunity to hunt. Much of this took place in winter as such was no deterrent to this man. And he acted as an administrator who visited villages, despite incredible road and travel conditions, or villagers came to him with their woes. He thus had an excellent oversight. In addition to his memoirs of hunting he left behind a popular history of the conquest of Siberia (*Mit Kreuz und Knute*). There are certain parallels between Russia/Siberia and early Canada. Fur is highly prized in Russia, and trapping is thus ongoing and severe. The trappers and hunters are not rich, and

depend on the forests and streams to make a living. These men are very skillful, and may be employed by those who can afford them – as Kapherr could – as assistants to hunting. Kapherr has a good many encounters with large bears that prey on livestock, which he is petitioned by villagers to destroy. Here is a remarkable parallel with Eben-Ebenaus expediences hunting large grizzly bears in the Swan Hills in Alberta. We are dealing with brown bears in both cases. Wolves however, are mostly non existing. Oh yes, there is here and there the howl of the wolf. Also, in sever winters wolves may come from the east into the districts administered by Kapherr. He does loos a prized dog to wolves while the dog pack is hinting the white tundra hare. Once, while he is spending a night in a village, a wolf opens a door below and kills a calf. Once he is able to get a wolf encircled and pushed out. He and his hunters fire with heavy lead shot and wound the wolf. The wolf is tracked over nearly 20 “werst” and is killed by his hunters. The wolf carried on despite his lungs having been pierced by shot. He also relates the success of a local hunter who killed a huge wolf at close distance with bird shot. He describes the poor armament of Russian hunters. I can only conclude that despite their poor armament Russian hunters and trappers were very good at setting snares and dead fall and eliminated wolves for precisely the same reasons that Max Hinsche describes for trappers in northern Alberta early in the past century.

Clearly, the matters which I unearthed in the relevant German literature deserve some close academic attention by historians.

**More info.** Alberta encompasses 255,541 square miles. Roughly half is boreal forest and wolf country. The wolf kill in the late 40's and early 50's thus varied about 1 wolf per 85 square miles to roughly double or 1 wolf per 160 square miles. Top wolf population in current time is about 3500 wolves in Alberta or about 1 wolf per 35 square mile. That's after wolves were protected and spread. Consequently, during the 1930's – 50's there probably were only some 2,000 wolves alive in Alberta. The trapper kill of about 800-1100 was thus considerable. (1951 there were 2,799 trap lines in about 127,770 square miles of area, plus 3,127 non-trap line trappers, or 1 trap line per 45 square miles of land, or 1 trapper per 6.7 miles in grid, or 1 trapper of all types per 25.6 square miles or, one trapper per 5.05 miles in a grid ).

Is it possible that even the partial destruction of pack would lead to the total loss of the pack due to competition from neighbors?

The answer is, apparently, yes. Even the removal of part of a pack can reduce its chances to survive let alone reproduce. See: Brainered et al. 2008. Effect of breeder loss on wolves. *Journal of Wildlife Management*. Vol 71(1):89-98.

In addition to the above, there were in Alberta operations to increase ungulate population numbers by poisoning wolves in the 1950's and 60's (Gunson 1992). There was poisoning campaign of wolves in British Columbia beginning 1951 and ending 1959, during which tons of horse meat poisoned with strychnine or 1080 were cast from aircraft. This effort was apparently considered only marginally successful!

**Recipe for harmless & romantic wolves (based on Alberta data):** License trappers so as to have one trapper per 25 square miles. Give him leg-hold traps, snares, poison and an accurate gun, insist that he live off the land, give him a monetary reward for killing wolves, hire predator control officers to kill all wolves entering agricultural lands, let game wardens poison wolves after the big game season, remove all legal protection form wolves so that hunters, ranchers, farmers etc can shoot them all year long, drop by the ton frozen horse meat injected with strychnine or 1080 from aircraft on frozen lakes all winter long, (note killings of wolves by native people as ongoing). With this recipe re-implemented,

expect very few, shy wolves with limited distribution, virtually free of *Echinococcus granaulosus* or rabies, expect strong game populations, expect little if any predation on livestock, and expect no attacks on humans (the odd rabid wolf excluded) and offer a monetary reward for anybody proving an attack on humans by a healthy wolf! Enjoy the occasional wolf howl in “real” wilderness setting! It is under such conditions as described by above recipe that American wolf biologists convinced themselves that wolves were utterly harmless, good for the ecosystem, and the global experience to the contrary, as symbolized by the Red Riding Hood fairytale, was irrelevant at best, and malicious, ignorant garbage at worst. Nice going!