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Dear Reader,

This two-part report was written with the understanding that the readers would be members of a jury and the judiciary in a coroner's inquiry into the death of 22 year old Kenton Carnegie. That is, missing here is an account of how Kenton Carnegie lost his life, except in so far as it can be deduced from the second part of this report, which addresses the question, who and what killed and consumed Kenton Carnegie. I was asked By Kenton's parents to look into the matter, as a fairly clear-cut case of wolf-predation was obfuscated by public claims that not wolves, but a black bear had done it. The motive appears to have been to perpetuate in the public media the myth of the harmless wolf, of a predator that does not attack people. This myth was the subject of investigation in the first essay, "*When do wolves become dangerous to humans?*". It is a lethal myth unsupported by current or historical information. That investigation led to some very odd insights, but also exposed flawed scholarship. Wolves can become exceedingly dangerous to people under the appropriate circumstances, and the tale about little Red Riding hood was based – alas – not on myth or superstitions, but on sound evidence! The inability of scientists to deal with historical scholarship is here partially to blame. In the second part of my report I go about examining the evidence pertaining to the death of Kenton Carnegie, concluding that wolves killed Kenton.

Sincerely,

Valerius Geist,

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WHEN DO WOLVES BECOME DANGEROUS TO HUMANS?

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ABSTRACT

The politically correct view about wolves, currently vehemently and dogmatically defended, is that wolves are "harmless" and of no danger to humans. This view arose from the early research of eminent North American biologists who, confronted by historical material contradictory to their experiences, greatly mistrusted such. Due to

language, political and cultural barriers they could access such at best in part, but they were nevertheless convinced that the old view of wolves, as enshrined in Grimm's fairy tale *Little Red Riding Hood* was incorrect and based on ill founded myths, fears and superstitions. They were greatly aided in this by premature conclusions about free-living and captive wolves carried on in North America, as well as by a brilliant literary prank by a renowned Canadian author and humorist, which illustrated wolves as harmless mouse eaters. While Canadian scientists quickly caught on, they nevertheless welcomed the opposition to the *Little Red Riding Hood* myth. They pointed to the undeniable fact that wolves killed no human in North America in the 20th Century. This did not, however, reflect on the nature of wolves, but rather on circumstances: wolves were eradicated or severely prosecuted over much of the continent, North Americans were well armed and quickly removed misbehaving wolves where such were still present, while hunted wolves are exceedingly shy and avoid humans. The view of the "harmless" wolf was greatly welcomed by the communist party of Russia, which ever since coming to power suppressed accounts of man-killing wolves. During and after the Second World War such censorship intensified, as was only disclosed after the fall of the communist rule in Russia. The reason for such suppression was to obscure the link between lethal wolf attacks and the disarming of the civilian population during the war. Wolves quickly exploited the defenselessness of villagers, leading to many fatal attacks on humans. When Russian scientists disclosed this, their translations in the west were suppressed and their authority and motives questioned by environmental organizations and some scientists. Ironically, Western environmentalists and Russian communists thus pulled on the same rope, albeit for different motives. In the West it was feared that valid information about dangers from wolves would impede wolf re-introductions and population recovery. It is even more ironic that, while wolf biologists stoutly denied dangers from wolves and failed to develop any understanding of the conditions under which wolves were harmless or dangerous, their counterparts studying urban coyotes did just that. They described a progression of behaviors, which predicts when coyotes would attack children. Wolves follow much the same progression. It can be divided into seven steps with increasing risk to humans, culminating with attacks on humans. Such a progression can be developed from historical material as well as from current attacks by wolves on humans in North America. The fairy tale of Little Red Riding Hood is thus based in very real historical experiences in central Europe. In addition to targeted attacks, wolves can mistakenly charge humans. The politically correct myth of the harmless wolf is being defended with a number of lethal fallacies as well as by wrongly invoking the prestige of science. In practice it is a lethal myth and the tragic death of 22-year-old Kenton Carnegie on November the 8th 2005 in northern Saskatchewan, is a case in point. He had no authoritative warning. He was killed by wolves, which, protected from hunting, were not merely habituated to people through the use of a garbage dump, but had already mounted a first exploratory attack on humans, which was narrowly defeated. Against a pack of wolves, a lone man has no chance.

POLITICAL CORRECTNESS

Flawed political correctness can be lethal! The political correctness I am concerned about here is the view that wolves are universally harmless, so that free ranging wolves pose no danger to humans. One is dealing here with a complex case of scholarship taken out of context, with a partially valid, but premature hypothesis becoming a politicized dogma and then, a case of extremism. It is also a case of wrongly invoking the prestige of science¹. In reviewing the material pertaining to predation by wolves on humans I have documented how evidence is distorted so as to uphold the myth of the “harmless” wolf². Moreover, the denying or manipulating of facts³ and blaming the victim have been prevalent following the attack of predators on people in North America⁴. Furthermore, as we shall see, the defense of the myth of the “harmless” wolf has reached extraordinary proportions⁵. Perpetuating that myth will, under currently developing circumstances in North America and in Western Europe, where un-hunted wolf populations are expanding, lead to needless injury or death of people. This is all the more tragic considering that one can pinpoint with great precision the conditions under which wolves will avoid humans as well as the obverse, the conditions under which wolves will attack humans. Moreover, such conditions are within our power to manage. It is inconceivable that wolf-conservation can be advanced if we do not prevent wolves from attacking people. While attacks have been extremely rare historically in North America, the increase and spread of wolves⁶ may change that. Of special concern are wolves that do not see humans as foes and adversaries and habituate to human presence. That, emphatically, does not bode well for the future⁷!

WHY DID REPUTABLE NORTH AMERICAN SCHOLARS DEVELOP THE NOTION OF THE “HARMLESS” WOLF?

We must ask first how it is possible that renowned scholars such as the late Douglas H. Pimlott⁸ in Canada and David Mech⁹ in the United States helped formulate the view of the “harmless wolf”. A review of their work reveals that (1) while they were very cognizant that wolves infected with rabies were dangerous to humans, (2) they never envisioned circumstances in which free ranging, healthy wolves could become dangerous to people, nor the opposite, namely the circumstances under which wolves remain harmless. Events in North America, at that time and historically¹⁰, did not lend themselves to that line of thought. Mark E. McNay puts it rather ironically: “*After gray wolves (Canis lupus) were exterminated over a large portion of their North American range during the early 1900s, researchers reviewed the history of wolf-human encounters and concluded that wild, free-ranging wolves posed little or no threat to human safety*”¹¹. Pimlott used the thorough review of wolf attacks on humans in North America and Europe by Dr. Doug Clark, formerly Chief of the Fish and Wildlife Branch, Ontario Department of Lands and Forests. Clark suggested that rabies was responsible for such attacks. He was skeptical of reports of wolf attacks as he experience in the Canadian continental wilderness only very shy wolves. And I must add here: so did I! Moreover, the harmlessness was emphasized by the ability of skilled biologists working in the wilds for decades with habituated wolves¹². Clark was apparently not aware of the behavioral differences between rabid and non-rabid wolves¹³. (3) Happenings to the contrary in Eurasia were screened for North American authors by language, political and cultural barriers. (4) As records of wolf attacks on people are a matter of history, and in the

professional domain of historians, a discipline quite different from biology, both biologists expressed skepticism towards historical matter. They were not alone in this skepticism¹⁴. They chose to label old reports of wolf attacks as the “Red Riding Hood” mythology without dealing with the veracity of historical records that gave rise to that or to similar European fairytales. (5) Moreover, as we have only recently become aware, there was in Eastern (Communist) Europe at that time a deliberate policy of deception, a practice of withholding and covering-up relevant information about wolf attacks on people. During the Cold War area Russian scientists could not freely discuss wolf attacks on people with their western colleagues. I shall dwell on that issue in some detail later. (6) The matter of how wolves deal with exploring new prey was not dealt with. It is a matter that requires technical knowledge of *habituation*, which is a knowledge that resides in the disciplines of animal behavior and psychology, not in wildlife biology. Wildlife biologists recognized relatively recently that the matter of habituation is highly relevant to wildlife management, long after the original writings of Pimlott and Mech¹⁵. The hypothesis of the “harmless” wolf was premature as eminent scientists were faced with highly contradictory information that they were somewhat leery of and could not resolve. However, their position was regarded then and subsequently as appropriate. And so did I for my entire professional career and well into retirement. How was it possible that early explores here saw a multitude of at the worst mischievous and curious wolves that were of no threat to the travelers? How could scientists work for years with habituated wilderness wolves¹⁶? How could one reconcile this with the horror stories from Europe¹⁷? One can get to understand such, but only by knowing well the discipline of animal behavior and the detailed, thorough studies done to understand captive wolves and wolf-dog hybrid behavior. Yet that research was then just in the making, and the information about the behavior of wolves as revealed in the studies of Erich Klinghammer at Wolf Park, Jerome H. Woolpy and Benson E. Ginsburg, Hary and Martha Frank, or Ray and Lorna Coppinger came later¹⁸. Still, on the face of it, the logic and facts appeared to fit together so simply: if, as Dr. Clark reported in his review, the attacks in Europe were caused by rabies, then healthy wolves in Europe did not attack people any more than they did in North America! Consequently, one need not fear attacks by healthy wolves and the fairy tale about Red Riding Hood was thus baseless.

Moreover, the conception of the harmless wolf is reinforced by popular accounts such as of the lone Alaska wolf in Juneau named Romeo who is trying to make social contact and is stealing dogs without injuring such¹⁹.

DISCOVERING THE ERROR

Unfortunately, the enthusiastic consensus that American wolves were harmless led to the view that even if wolves could be dangerous to people outside North America, such information was irrelevant to an understanding of our North American wolves. I too was guilty of this lapse in scholarship. I too held this erroneous view during my entire professional career and until four years after my retirement. While I retained an intense *personal* interest in carnivores, and eagerly observed free ranging wolves for hours on end in one of my field studies, an opportunity that arose every 10-14 days during two winters, the focuses of my scholarly interest were the large herbivores. I thus deferred

judgment to reputable colleagues who were studying carnivores *professionally*. I awoke rudely from that mistake in 1999 only after being confronted by a “misbehaving” pack of wolves about our Vancouver Island home. The behavior of these wolves defied North American conventional wisdom²⁰! I was forced to change my mind not because of the written scholarly record, but because of the unexpected personal experiences with wolves beginning in summer 1999 and carrying on to this day²¹. These Vancouver Island wolves acted like *Russian*, not like *American* wolves. It was a case of a wolf pack trying to establish a territory “*in multi-use landscapes surrounding houses, farms, villages and cities*”²², the “future habitat” of wolves globally as envisioned by the cited Norwegian multi-author report on wolves. In our case it was at the edge of a rural district among livestock barns, factory buildings and suburban houses. The wolves became visible. They acted totally different from the wolves I had known in the wilderness areas on the mainland. The – utter - devastation of wildlife, wolves threatening neighbors and my wife, wolves following people into barns, on verandas and to their very front doors, wolves deliberately and calmly approaching and observing people at close range and following neighbors on horseback, a wolf fraternizing successfully with sheep-guarding dogs, all this - and more - was simply not part of my expectations. One hesitates using the worn-out word “shocking”, but it’s close to what I felt. I happened to meet David Mech in Calgary at the Wildlife Society convention, and told him about it. His response is equally revealing. “Val” he said “*had anybody else told me, I would not have believed it.*”

The “misbehaving” pack stayed with us from summer 1999 till March 12th 2003, when a neighbor shot the last of the 13 wolves after it successfully fraternized with his sheep dogs for nearly half a year. The rest were eliminated by a predator control officer and the neighbors, myself included. I had thus four years of pre-misbehaving pack experiences, followed by almost four years by vivid “bad wolf” experiences, followed by three years when only a few well-behaved wolf visitors came through, followed by a new “misbehaving” pack establishing itself early in 2007²³. I had thus in addition to my personal observations, and those of Renate, my wife, those of my neighbors – all first-hand experiences. In totality it was a large body of consistent observational material. I wrote about it to Erich Klinghammer, in a long letter, which was eventually published by Jack Gwynn in the *Virginia Wildlifer*.²⁴ The wolves, which visited us between packs trying to establish themselves, were passing thorough invisibly and were on their best “American” behavior.

UNDER-REPORTING WOLF INCIDENTS

An important factor that biases the lore about wolves in North America is that only a small fraction of the interactions between wolves and people are reported. The exceptions are attacks that lead to injuries or death of persons so attacked. Living in rural Canada as I do now in retirement, I am very well aware that wolves kill pets and livestock, or confront people and are shot in the process, and these incidents are rarely reported in the newspapers, on radio or television. None of what happened to my wife, our neighbors, or myself when we lived with a misbehaving wolf pack from summer 1999 to spring 2003 was ever reported in any Canadian news outlet. However, an incident in 2007 did make the press²⁵. Our observations were recorded in the professional press read by American

wildlife managers²⁶. A senior fellow biologist who had been confronted twice by wolf packs on Vancouver island and who had to climb to safety, told me he never speaks of the incidents because nobody believes that wolves could be dangerous. I have been notified that there are others with that experience and view²⁷. In short, the claim that aggressive interactions between wolves and people are exceeding rare is in part an artifact of incomplete reporting²⁸.

As McNay reported, for decades the common reply of biologists to concerns about wolves were similar to the following statement:” *There has never been a documented case of a healthy wild wolf killing or seriously injuring a person in North America*” (Mech 1998:9)²⁹. A brief acquaintance with matters posted on the Internet reveals a huge publicity campaign by various organizations to paint a positive picture of wolves as harmless creatures, including lesson plans aimed at schoolchildren. Scientists delivering the “harmless” wolf message are lionized. No well-educated person can possibly escape the message that wolves are harmless and have received in the past a bad reputation due to ignorance, superstitions and malice. And after all, we are assured; it’s based on science! Yet modern studies by competent scientists of the innate behavior of wolves show that humans would have been the prey of wolves³⁰. This, however, does not deny that wolves may attack persons for motives other than predation. Early in the exploration by wolves of our neighbors, my wife and myself the wolves barked and howled in their confrontations treating us thus as if we were rival wolves, not prey.

THE MYTH TURNS DEADLY

Kenton Carnegie is not the only victim of the “harmless wolf” message. So was 24-year-old Wildlife Biologist, Trisha Wyman, who was killed on April 18th 1996 by a captive wolf pack in Ontario. In a phone conversation with Erich Klinghammer of Wolf Park, who was called in as an expert witness to examine the Wyman case, he reported that there was great surprise at her death, as wolves are not supposed to attack people. He was stunned at the ignorance. Ms Wyman had visited the park previously and spent some time studying the wolves. She was given the dream job of looking after and interpreting the wolves. She lasted three days! She and the people surrounding her, just like Kenton and the people surrounding him, must have been totally imbued by the myth of the “harmless wolves”. Had there been but proper preparation, such as turning to the people running Wolf Park who have been researching wolves for decades and have detailed advice on how to handle captive wolves and wolf-dog hybrids³¹. Had this been done, it would have disabused anyone of a naïve faith in the “harmless wolf” message. Wolves in packs, be they captive and socialized or not socialized (the wolves which killed Trish Wyman were not socialized) or be they free ranging, can be exceedingly dangerous, absolutely lethal – depending on circumstances. Its circumstances that count not the misleading statistics that wolf attacks on people in North America are infinitesimally rare.

Mr. Fred Desjarlais was attacked and wounded by a wolf on December 31st, 2004 near Camenco’s Key Lake Mine in northern Saskatchewan. This appears to be another case of a garbage-habituated healthy wolf attacking a person. Again, there was apparently no

understanding among personnel or government agencies, that habituating wolves may attack people.

The Vargas Island wolf-attack was in a campground accessible by sea only and frequented by campers using kayaks. This suggests that persons using such were informed, environmentally astute outdoor enthusiasts. Here too the exploratory attacks by wolves were not taken seriously, till they escalated into a severe, injurious, but still clumsy attack upon Scott Lavigne on July 2nd 2002³².

In the recent (July 5th 2007) Anderson Island, British Columbia, case a 31-year-old outdoorsman with a kayak was put into hospital by a 25 Kg emaciated, old female wolf with damaged dentition, despite him stabbing her nine times with a knife with a 4-inch blade. This did not kill the wolf, but did cause her to withdraw. She was shot hours later with a shotgun. It was an unprovoked, predatory attack. The victim declined interviews fearing that such would reflect negatively on wolves³³.

A captive pack of nine wolf hybrids, kept as pets, killed its owner, Sandra L. Piovesan, of Salem Township, Pennsylvania, on July 17th 2006³⁴. Linda Wilson Fuoco and Chico Harlan, Pittsburgh Post-Gazette wrote that Ms. Piovesan treated her wolves like children, and said as much when neighbors asked about them. Ms. Piovesan said that "*they (the wolf-hybrids) give me unqualified love*". She fed the animals' road kill that sometimes caused the nearby neighborhood to smell. She said that she liked the wolf-dogs because they were pretty. While the notion of the "harmless" wolf is here not explicit, it is implicit. At risk are, clearly, the well-educated, caring persons who place their trust in science.

WHAT RUSSIAN SCHOLARS SAID.

Please contrast the above with a statement by two renowned and reputable Russian scientists: "*Wolves are harmful to humans in many respects; they attack livestock and dogs, wild ungulates and other useful animals, spread diseases and attack people directly. The little use which may be derived from captured wolves (skin, tasty meat which is fully suitable for food) as well as sporting pleasures of hunting wolves, are not to be compared to the damage to human health and economic interest caused by these undoubtedly injurious predators*". This statement opened the section on the practical significance of wolves in V. G. Heptner, N. P. Naumov on p. 262 of *Mammals of the Soviet Union*. Vol. II, Part 1a. It was translated under the editorship of Dr. Robert S. Hoffmann, also a renowned zoologist, and published by the Smithsonian Institution, Washington, DC. Originally published in 1967, this series became available in German in 1974, but in English only in 1998. Heptner and Naumov also pointed out episodes and circumstances when wolves had killed and consumed humans, but they did not treat the subject exhaustively. As I shall show below, there were weighty reasons why could not publish more.

While this source on wolves was evidently not available to only English speaking biologists, it was available to European biologists, as was shortly thereafter the 1980

book “*Povedenie Volka*”, (*The Behaviour of the Wolf*) published in Moscow by the Soviet Academy of Science under the editorship of Prof. D. Bibikov. It was followed by the 1982 book on wolves by Mikhail P. Pavlov. Both authors are highly reputable scientists. However, translations into Norwegian from Professor Bibikov’s Russian book provoked defamatory condemnation by Scandinavian conservationists in the news media. After Pavlov’s book became available in Norway, three of its chapters were translated and published by Norway’s “Naturvårdsverket”, the agency responsible for the protection of nature. It generated in the media hysteric responses by non-government organizations supporting wolves and their reintroduction. They demanded, among others, that the distribution of the translation be halted and all copies be destroyed. Unfortunately this was done, apparently an illegal act. (A translation of Chapter 12 of Pavlov’s 2nd ed. 1990 is appended to this report³⁵). Subsequently, the translator of Pavlov’s and Bibikov’s work, Elis Palsson, indignant over this blatant censorship and suppression of ideas and facts, had his translation published as a book in Swedish³⁶.

SCHOLARSHIP GONE ASTRAY

It is self evident from the foregoing that an understanding of wolf predation on humans could not be expected to come from North America. Not only were there far too few incidences³⁷, but also the historical information was often not clear if only rabies-infected wolves attacked people or if healthy wolves were involved as well³⁸. Consequently, an understanding of wolf predation on humans would have to come from Eurasian sources.

An opportunity arose in 1984, as subsequent to the controversy about the translation of Russian publications, the Norwegian State Institute for Nature Research struck a committee of 18 scientists to review the dangers from wolves³⁹. Clearly, this was the inquest to thoroughly investigate wolf attacks on humans using appropriate historical and current sources, as well as up to date science.

However, that did not quite materialize. While the 2002 report covered wolf/human interactions throughout the wolf’s range in Eurasia and North America, by country, as well as those of other large carnivores, and despite, some excellent information and 18 authors notwithstanding, the report fell short in some regards. However, the report can be lauded as unique in modern times in that *western* scientists acknowledged frankly the potential dangers from wolves. Moreover, five years after the report its central conclusions appear to be become official policies in Europe⁴⁰.

What went wrong?

In the first instance the study of attacks by wolves on people requires the tools and insights of competent historians – not of scientists! Scientists are not equipped professionally to search out, let alone verify the validity of historical accounts of wolf attacks on people. Only after the historians have done their part, then the role of science is to investigate the validated reports for matters that only a scientist can perceive and deal with, namely the attributes that arise from the biology of wolves. This was an opportunity to decipher and to explain the patterns of behaviour that in wolves – as in coyotes⁴¹ – signal the impending attacks on humans. Yet this was not done. One is thus

left wondering how it is possible for students of coyotes in urban areas to develop a predictive warning system that foretells the coming of attacks by coyotes on children, while a large number cooperating scientists fail to do so when studying the much richer European and Asian material of wolf attacks on humans.

Secondly, the study is transparently biased towards the conventional “harmless” wolf conception. One wonders if this is an example of undue influence on Europeans of American ideas that were then fashionable in science? It apparently escaped the authors that they had the means in hand of testing the American “harmless” wolf conception as a hypothesis.

Thirdly, it is the report’s contention “*that large carnivores must be conserved in multi-use landscapes surrounding houses, farms, villages and cities*”. Yet where in their search have they found one example of wolf packs existing for a long time in harmony with humans close to “*houses, farms, villages and cities*”? Had there been a way to co-exist with wolves, would not the Europeans and Asians have discovered it long ago? Had there been a way to co-exist with wild wolves would Western Europeans have gone to the high economic and social costs that was entailed by the massive, yet inefficient methods of destroying wolves? Did not the authors of the report notice to what pains, inconveniences and costs Europeans went historically to remove wolves? Moreover, the authors appear unaware of the horrendous assumptions they made about the behaviour of wolves, for how is their contention commensurable with the hard-wired interlock of instinct and imprint-like learning in wolves, as worked out in the last three decades by behavioural scientists? As Janis Koler-Matznick puts it, wolves are extremely difficult to condition to reliably inhibit inherent behaviour⁴². Moreover none of the scientists involved had first hand experience with wolves trying to establish themselves “*in multi-use landscapes surrounding houses, farms, villages and cities*”. And first hand experience, alas, is still the most potent factor in science, as I must attest to from personal experiences. We would not do field work otherwise!

Fourthly, there is the misinforming and misinformed statistic. While the authors’ contention that wolf attacks on humans are rare is *historically* correct, it is a dangerous and misleading statement as it’s implied advocacy may mollify the reader into lethal complacency. Such a statement misinforms fundamentally about risk. Yet it is a statement in many scientific, let alone popular communications about wolves. In that statement the writer has substituted the reader’s (client’s) judgment with his own. It’s a piece of *advocacy*. The *professionally* correct manner of proceeding is to tell the reader under which circumstances there is a low or a high probability of a wolf attack – and let the reader (client) come to his or her own judgment. Let me put it another way: by stepping into my car I accept the miniscule risk of driving over a cliff – unless I point the nose of the car over a cliff and hit the accelerator. Now, what happened in Northern Saskatchewan in the fall of 2005 with wolves was the equivalent of pointing a car over a cliff and preparing to give gas! The wolves were showing the wolf-coyote progression of behaviors that had to lead to attacks on humans, exploratory and final – and nobody recognized it. Quite the contrary, every one involved acted - firmly! – as if wolves would not attack people.

Professionalism kicks in when the precursors – scholarship, science, interdisciplinary studies – have been exercised in an adequate and disinterested fashion. The professionally correct way to proceed is to give the reader the ability to accurately judge when wolf attacks are likely or unlikely. Then dangerous circumstances can be recognised and the chances of wolf attacks on humans – totally - avoided. And that must be the goal, not convincing the public that the death of few children is an acceptable cost of maintaining wolves for the “good of the ecosystem”.

And one more concern pertaining to statistic: any expression of chance hinges on circumstances. Wolves will indeed exceptionally approach people, lest alone molest or attack them if the circumstances of the past can be repeated. In principle, that is unlikely. Consequently, it does behove the professional to explore when circumstances insure a Zero probability of wolf attacks and when the probability is One.

Fifthly, the Russian material was selected in the report for some negative treatment. Pavlov was belittled as a non-scientist, a false claim as this senior person (Pavlov was born in 1920) published over 150 scientific papers and is a member of the Russian Academy of Sciences. He was accused of anti-wolf biases for stating, “*in the main part of the Soviet Union wolves can not be regarded as a member of the ecosystem*” or stating that there was no need to maintain wolves in protected areas to keep ungulate populations in “balance”. Did they not discover that wolves’ left to their own fate severely denuded the landscape of almost anything “wildlife” (as I have personally observed on Vancouver Island in Canada)? Assuming Pavlov aimed to maximise wild ungulate populations through extensive wolf control, is that not a certain way to insure wolves through the creation of a lasting food base? There was no recognition of Pavlov’s political courage to even write on the dangers from wolves, or the difficult conditions he laboured under, or the cautions he so carefully expressed. Nor does the study allow for the implications of Pavlov’s political revelations. This unfortunate matter can be followed in some detail in Appendix ⁴³X to this report.

Clearly, the biology of the wolf ceased to be mere matter of science, but became politicised. The politically correct version is currently the image of the “harmless” wolf that does not attack people. Matters to the contrary are labelled derogatorily as the “*Little Red Riding Hood Lies*” all historical evidence to the contrary!

While we may decry the censorship in Communist Russia of lethal encounters with wolves, as revealed by Pavlov, what are we to make of the censorship applied to Pavlov’s work in democratic Norway? Or for that matter in the USA, for when Pavlov’s Chapter 12 was translated into English by the eminent Russian zoologist Dr. Leonid Baskin, his wife Valentina, and Alaskan wildlife biologist Patrick Valkenburg, then edited by wildlife biologists Patrick Valkenburg and Mark McNay, they could not find a publisher for the translation. This translation now appears as Appendix A in Will Graves book on Russian wolves published in Canada ⁴⁴, as well as Appendix A attached to this report. I refer to Appendix F⁴⁵ and the words of Dr. S. Korytin on human casualties of wolf attacks who published 1990 in a leading hunting magazine “*Ohota i ohotnitshje*

hozjaistvo” N 6, an article “Wolves as man-eaters” . *“The attacks of wolves on people has since times immemorial been one of the most horrible scourges. Thus, in the space of just three years (1849 – 1851), 260 adults and 110 children died because of wolves (Lazarevskii, 1876). Official statistics were kept of the cases. In the annual reports of the governors this information was concentrated in the table on the causes of death of the population into the column “Killed by wild predators”. After the revolution no statistical information on wolf damages were published in our country, but chance information still sometimes found its way into the newspapers. (Kuzmich, 1925; Barabash-Nikiforov, 1928; Timofejev, 1949; Kornejev, 1950; Serzhanin, 1955; Shnitnikov; 1957; Marvin, 1959; Nazarova, 1978; Peskov, 1979; Zhumadilov, Mahmutov, 1979; Osmolovskaja, Priklonskii, 1979; Boldenkov, 1980; Janshin, 1980; Garbuzov, Janshin, 1980; Cherkasskii, 1985). In reality, the number of such cases was much bigger: M.P.Pavlov (1965, 1989) published previously unknown facts on wolf attacks on humans, which, apart from the author himself, P.A. Manteifel and G.P. Kamenskii had collected. The principal part of the material deals with wolf damages to children in various parts of our country during and after WW II. Proven cases were 103. Korytin, is a doctor of biology, professor, director of the Prof. Zhitkov department of ecology and ethology of VNIOZ, the All-Union Scientific Research Institute for Hunting Economy and Furbearer Raising.*

The North American and the Russian and historical versions are, of course, not exclusive, rather, they are both valid - depending on *circumstances*.

HOW DID THE MYTH OF THE “HARMLESS” WOLF ARISE?

It is thus important to first understand how the myth of the “harmless wolf” arose. It is a North American invention of the 20th century and based on circumstances peculiar to the 20th century on this continent. These are (a) the fact that in the past century there is no record of a healthy, wild wolf killing a person in North America, as compared to 59 persons being killed by bears and about 17 being killed by cougars. Overlooked were the earlier North American records of wolves attacking and killing humans. (b) The deliberate propagation of a distorted, fictitious picture of the wolf in order to foster its preservation, and in Communist Russia to justify the confiscation of weapons in rural areas, deliberately keeping the population unarmed. (c) The (false) notion that wolves are highly adaptable to and compatible with the presence of humans, a notion again going back to North American experiences with native predators, but inaccurately interpreted.

LET ME BEGIN BY ASKING:

Why did wolves kill no human that we know of in the 20th Century in North America (but did so in the 19th?)

The short answer is that (a) wolves were historically very scarce, in part due to severe prosecution, (b) the North American population is heavily armed, (c) because hunted wolves are exceedingly frightened of humans and (d) because an open hunting season leads to the quick removal of “misbehaving” wolves, well before they can cause damage.

1. Wolves were scarce or absent over virtually all of North America except late in the 20th Century.

- Gray wolves were not present historically in California as well as large stretches of Washington and Oregon and southern states. Ergo no gray wolf could have confronted or killed a human where wolves are missing⁴⁶. The assumption perpetrated with the American version of the “harmless” wolf hypothesis is that wolves were always very common through out the 20th century in North America. That assumption is false⁴⁷.
- Following the demise of the bison herds in 1885, “wolfers” moved in with strychnine and began exterminating wolves through out the American West and Canada in order to facilitate livestock ranching⁴⁸.
- Wolves were virtually exterminated early in the 20th century in the United States and over large regions in Canada.
- Wolves enjoyed no protected status even in national parks in the US and in Canada early in the 20th century. Wolves were eliminated from Yellowstone National Park by 1926⁴⁹.
- Government predator control officers systematically destroyed wolves where they interfered with agriculture in Canada.
- Where and when wolves currently interfere with agriculture in Canada they can be readily trapped or shot.
- Wolves did not enjoy the status of a game animal till very late in the 20th century in Canada and Alaska, and could be shot on sight throughout the year.
- Trappers caught wolves freely whenever fur-prices rose.
- Natives told me repeatedly that to deal with excess wolves it was best to hunt down their dens and destroy the pups⁵⁰.
- Wolves were systematically poisoned via aerial broadcasting of poisoned bait when there was fear of rabies⁵¹.
- Wolves were killed via aerial shooting in order to relieve predation pressure on valuable ungulate populations.
- Native people hunted wolves for their excellent fur for producing winter clothing, but also disposed of wolves that happened to follow them⁵² (for good reasons as we shall see).
- There were regional bounties on wolves.

In short, wolves were very scarce during much of the 20th century in North America⁵³, a fact I was keenly aware of while doing my research work in the Canadian wilderness, which stretched between 1958 and my retirement in 1995. For reasons of chance and mathematics, meetings between wolves and people were very rare.

2. People throughout North America were well armed historically and wolves meeting armed people were eliminated before they caused excessive trouble.

- In the areas of North America where wolves survived in sparse populations, they invariably met armed humans, native and non-native trappers and hunters, prospectors, surveyors, ranchers, farmers, while firearms were available to road crews, truckers, and loggers. Woe to the wolf that showed itself!
- Conversely, where there were serious clashes between people and wolves, bears or cougars the persons attacked were not armed with firearms – with one exception⁵⁴.
- While there have been reports in the Canadian press or news media of wolves attacking people, the large number of incidents that fall just short of that - because the wolf or wolves are shot - is not reported. Neither are instances of predation on pets and domestic livestock. None of the confrontations with wolves by ourselves or our neighbors – excepting one (see end note 17) -, or the damage wolves caused, was ever reported in the Canadian news media, although I did publish such a report in a professional US outlet for wildlife biologist (see end note 13). Consequently, reports of wolf/human interactions are greatly underreported.

3. Under specific circumstances wolves avoid any contact with people.

- When wolves are (a) well fed as well as (b) hunted they become extremely shy and avoid contact with people. Wolves are shyer than wolf/dog hybrids, which in turn are shyer than dogs. Where wolves are found in low numbers relative to prey and where they are hunted and trapped, they develop a great fear of humans, even if it is only fresh human scent. I can vouch for that from personal observations when I was doing field studies of mountain sheep in northern British Columbia and the Yukon (1961-65). Under such circumstances wolves are practically invisible and impossible to hunt with conventional means.
- Wolves tend to shy back from attacking persons that act confidently, or boldly without visible fear⁵⁵, especially if the persons make themselves tall⁵⁶. This goes for free living wolves as well as for wolves in captivity.

Consequently, lethal wolf attacks during the 20th Century are absent in North America because there were very few wolves, the wolves were hunted and very shy and avoided people, and the few wolves approaching people were inevitably shot. Where people were attacked and injured by wolves, they were in all cases without firearms⁵⁷.

No case can be made that wolves *inherently* avoid preying on people.

A LITERARY PRANK

The conception of the “harmless” wolf got a big lift from what can only be considered a brilliant literary prank. A very talented Canadian author and humorist, Farley Mowat, presented as fact a fictitious account of wolf biology in his 1963 book *Never Cry Wolf*. The literary establishment fell for it and is still falling as evidenced in a film based on this book as well as study guides, while it is still advertised by Amazon books as a true-life story. It was quickly dismissed as fictitious by Canadian biologist Frank Banfield (1966)

and Doug Pimlott (1967)⁵⁸ but their book reviews in academic journals carried little weight. Moreover, they were humorously countered by the author, who carried the public with him. As David Mech writes:” *Whereas the other books and articles were based strictly on facts and the experiences of the author, Mowat’s seems to be basically fiction founded somewhat on facts. It appears to have been compounded by his own limited adventures with wild wolves plus a generous quantity of unacknowledged experiences of other authors; a certain amount of imagination and embellishment probably completed the formula for this book*⁵⁹” Subsequently a lengthy exposé of Mowat’s book and working habits was published by John Goddard in the May 1996 edition of *Saturday Night*⁶⁰. Karen R. Jones covers in her book⁶¹ the reaction of reviewers in western Canada to Mowat’s book, drawing on some eminent scientists such as Bill Fuller of the University of Alberta, and Jim Bendell then at the University of British Columbia. Mowat did not take them in. Quite the contrary! Because of the unmasking, Mowat’s book is not cited in the science literature as an authority, but its impact on lay persons is enormous! And not only in North America!

RUSSIAN COMMUNISM EMBRACES THE “HARMLESS WOLF” CONCEPTION

Mowat’s book was a popular hit in Russia and came virtually God-sent to the Communist party and its propaganda. There is no doubt that the Russian scientists were well aware of the reservations of Canadian scientists⁶². Nevertheless, despite communist eulogy to matters scientific (and thus to objectivity), the book was translated and widely distributed. The reason for this official enthusiasm for the “harmless”, mouse-eating wolf was only revealed by Pavlov (see Appendix X, the translated Chapter 12 of his 2nd or 1990 edition of his book on wolves). Russia had conscripted the able-bodied men at the beginning of World War II from the villages and sent them to the front to fight the Wehrmacht. Simultaneously, all hunting weapons in the villages were confiscated leaving the women, children and old people utterly unarmed. **Wolves clued in on that quickly, leading to heavy predation on livestock and a wave of lethal attacks on villagers, primarily children.** The Russian government slapped a ban on all reports of wolves attacking, injuring or eating humans keeping such records secret. These records were only discovered after the fall of communism in Russia. This policy of silence pertaining to wolves killing people also explains earlier actions, such as failure to record wolf attacks on people after the fall of the Czar in the October Revolution, as well as the subsequent reports by some Russian authors that all tales of man-eating wolves were fictitious. It was not in the interest of the communist party to permit an armed citizenry, which is the only effective antidote to wolf attacks. After World War II Professor A. A. Mantjfel led a commission appointed by the highest hunting authority of the Russian Federal Republic, to investigate wolves killing people, but this came to naught, probably for above reason. The link between disarming of the citizen and the numerous deaths from wolves thereafter must not become public knowledge. This explains in retrospect the rather sparse account of man-killing wolves by Professors Heptner and Nasimovic in the (1967) *Mammals of the USSR*, and their selection of only a few, but very gruesome cases, including multiple killings by the same wolf. There was consequently no way in which man-eating wolves could be discussed freely by western and Russian scientists

during the Cold War era. The killing of people by wolves in Russia continues, but is underreported, as does the scarcity in civilian hands of effective firearms and especially of ammunition⁶³.

PREMATURE ENTHUSIASM

The book *Arctic Wild* by Lois Chrisler⁶⁴ describes how a couple of photographers out to film caribou raised wolf pups while they were out in the barrens. The wolf pups were a delight to be with, as vividly described in the book. And indeed wolf cubs before reaching full maturity are very submissive and thus perceived as very sweet. They have to be, for their life depends on being accepted continually by the parents and the pack. However, with maturity there are tensions in the pack, expulsions may take place, or “revolts” in which on rare occasions daughters kill mothers and sons kill fathers. Every captive wolf will at one point attempt to dominate his human companion. From such tests there is no escape although this is a complex matter. If the human companion survives the attack, the wolf reverts to accepting his dominance. However tensions remain as the wolf cannot be commanded, and remains through life a very independent spirit.. Decades of work with wolves by Erich Klinghammer and Harry Frank Martha Gialdini Frank and their colleagues are relevant here⁶⁵. As Janice Koler-Matznick puts it, wolves have a biological imperative to move up in the dominance hierarchy making sexually mature wolves in human company dangerous⁶⁶. Although competitive, wolves in a pack are not above supporting an injured companion, and do hold back on biting hard in a dominance dispute, minimizing injury⁶⁷.

WOLVES ARE NOT VERY “ADAPTABLE”

Another assumption based on North American experiences with native large predators is that gray wolves are adaptable and thus can be made to live close to humans, much as do black bears, cougars and coyotes. The latter are old, native North Americans, which were for at least two million years a part of the native North American mega-fauna, which collapsed at the end of the last Ice Age (some 11,000-7,000 years ago). However, these three carnivores survived as did a few native herbivores while the remaining 50 plus species of large mammals went extinct.

Black bears, cougars and coyotes can be lethally dangerous to people, but they are virtually invisible much of the time even within towns, and not consistently threatening to us. Much of the time they are nocturnal and very cautious and escape detection. Moreover, they tend to flee quickly upon sighting humans - except where protected. However even then the cougar remains invisible. Our experience is that we can live with these three predators, and manage the dangers arising. The reason why these three native North American carnivores are so adaptable and “smart”, appears to be a historical one. Ice Age North America was populated by very big, highly specialized predators, and the surviving ones were way down on the totem pole of power. This fierce predation pressure insured that native North American predators and herbivores were exceptionally able to avoid predation. They are very adaptable!

The wolf is not⁶⁸. It is a Siberian species, which spread throughout North America with other Siberian species such as grizzly bear, wolverine, moose, elk and humans when the native Mega-fauna died out beginning 12,000 years ago⁶⁹. Wolf, grizzly and wolverine were thus not subject to the ferocious predation pressure as there were few of the mega-predators present in Eurasia. They are expected to be more instinct-bound than black bears, coyotes and cougars. The latter are doing quite well in North America, even close to humans, the wolf, grizzly and wolverine are not. These three “Siberian” species are of great concern to wildlife conservation. The three old Americans are not.

Traditional wildlife biology in North America is deficient in an understanding of animal behavior, and a lack of attention to *instincts* in wolves and their programmed, *imprint-like* learning is a matter in point⁷⁰. The strength of modern animal behavior is its contribution to an understanding of the adaptive role of behavior and its evolution. The genetic components of behavior are summed together as instincts. While these are genetic in origin, they tend to be applied in an opportunistic though usually logical fashion. During their two-year development from puppy to adulthood, wolves go through critical stages of learning, virtually imprinting, which results under the tutelage of adult wolves in effective adjustments to local conditions and insure success in hunting, socializing and reproducing. An adult free-ranging wolf so imprinted and conditioned cannot readily switch to another pattern⁷¹, and if it does, then only in the face of real hardship or overwhelming opportunity. This has been the finding of modern studies into the behavior of wolves⁷². **Consequently, when wolves that shun humans begin to be curious about humans, it's a dependable sign that the wolves are seriously interested in humans as prey.**

Examining the incidents of wolves preying on humans and circumstances surrounding these events, a pattern appears, irrespective of historic age or locality. That is a hint that here are instincts at work. How such instincts are structured, is revealed by comparing the behavior of different dog breeds. Each dog breed emphasizes different aspect of the predatory instincts, and such patterns are heritable⁷³. And that means that in the future wolves will again prey on people, as they are instinct bound to do – granted the right opportunities and constraints.

We now know, and – as shown below - have known for centuries, that free ranging wolves short of food and habituating to people will – eventually - begin exploring humans as alternative prey. Under such circumstances the attack of a lone wolf is very dangerous even to an athletic man, while the attack of a pack is absolutely lethal. It must be emphasized again and again that wolves habituating to us *cannot act otherwise!* They are closely bound in their behavior by instincts that served them very well for millions of years. We cannot expect wolves to learn new tricks the way dogs do⁷⁴. How then, one may ask, can wolves “*be conserved in multi-use landscapes surrounding houses, farms, villages and cities*”?

“DEBUNKING” THE *LITTLE RED RIDING HOOD* IMAGE OF WOLVES; THE HISTORICAL RECORD

The German Philosopher Emanuel Kant is credited with the quip that “*We learn from history that we do not learn from history*”. His whimsical wisdom is relevant here. The knowledge pertaining to man-eating wolves spans centuries and continents, but has been one of the best-guarded secrets in North America, Communist Russia, but also Western Europe. Information concerning man-eating wolves was dismissed and suppressed in various ways. It is important to record here, at least briefly how and why this was done.

The material pertaining to man-killing wolves is not science and can never be “scientific”. To make demands that it be so is based on a mistaken notion of what science is within the larger realm of scholarship. We learn about wolf attacks on humans from a great number of diverse sources, from interviews of first person experiences of survivors, participants and observers, from entries by priests into parish records, from entries by county clerks into county and court records, and the evaluations of such records by commissions, the police, scientists, historians, civil servants and laypersons. Historians have the best tools and background to study such reports and place them into context⁷⁵. Science enters the scene only in that it can pronounce on the same material in a manner historians and other disciplines cannot. And what science can contribute depends entirely on the disciplinary background of the scientists involved.

And then there is science and science. Matters of wolf behavior and ecology fall into the broad discipline of Biology, which arose historically as “Natural History”. The last great proponent of this way of doing science, was the late Konrad Lorenz, one of the fathers of the modern discipline of animal behavior (ethology) and rewarded with the Nobel Prize for his efforts. He was close to contempt for modern mathematical trendiness, and relied instead on close observation, descriptions and his beloved Anecdotes. That is, he worked not unlike Charles Darwin, who arguably gave humanity the most important theoretical understanding of life⁷⁶. And material pertaining to the biology of wolves in general, let alone of man-killing wolves, is very anecdotal. A quantitative approach to such would be in the discipline of Epidemiology, but the material is far too limited and far too complex to expect results from a quantitative epidemiological approach. Moreover, Epidemiology prior to the application of statistics uses historical approaches, that is, good detective work! And good detective work is not limited to science.

Before turning to the pertinent historical material about man-killing wolves, I shall enumerate some of the criticism thrown its way.

- Predator killings are invoked as a cover-up for murder. See Professor Ray Coppinger’s note in which he refers to three such examples. This is a legitimate concern for police authorities.
- The accounts are not “scientific”. A derogatory defamation based on a misunderstanding of science and scholarship by the critic. Historical accounts by definition are not scientific, but are equally trustworthy, as is good detective work.
- The accounts are biased because the author is a hunter. This attempted defamation ignores that the great hunter-led success of wildlife conservation, particularly in North America, that secured the biodiversity of the continent, led to a powerful grass-roots organization of conservation labeled the North American Model of

Wildlife Conservation. It was hunters that organized the basic system of continental conservation, without which, for instance, the endangered species legislation could not exist⁷⁷.

- The author hates wolves and is therefore biased. For this claim some back-up evidence is required, but I have not seen such. In former time the hatred of wolves was well grounded in terrible experiences, such as rabid wolves biting a large number of people. These died a horrible death as rabies was incurable at that time.
- The accounts of man-killing wolves are outright fabrications and lies. On what evidence? Here a historical investigation can and do clarify matters.
- The concerns about man-killing wolves are exaggerated in order to make some political or personal gains. This criticism cuts both ways as pro-wolf proponents may also exaggerate. The way around this is to apply disinterested scholarship to all accounts pertaining to wolves, initially by historians. The fear of wolves is under some circumstances perfectly warranted and people so affected deserve our sympathy.
- The disappearance of children may just as well have been for reasons other than wolves. A fair warning, but not applicable to official records of investigated cases of wolf predation on humans. There are enough well documented cases of wolf predation on humans so that padding with doubtful cases is not required.
- It might be that women bearing children out of wedlock were so ashamed that they took the newborns to the woods and abandoned them. A rather peculiar speculation, without a single case verified. Babies are not among the wolf-victims. Also, is it not the mother's aim to make the baby disappear? Who then would report such incidents?
- The wolves involved in killing humans were actually dog-wolf hybrids or wolves raised by humans and then released. "Real" wolves do not kill people. Indeed there are documented records of hybrids killing people⁷⁸. However, dogs and wolves have hybridized throughout the wolf's range, and wolves do hybridize with other canids such as coyotes and jackals. All this means is that an increase in wolf numbers insures an increase in the dangerous wolf/dog hybrids (and of rabid wolves), hardly a social good to aspire to.
- Emphasizing (in Finland) the danger from wolves is a well-trying method of getting transportation for school children, which is paid by the municipality, if the requirements of the law of five-kilometer distance from front door to school are not fulfilled. One can only congratulate Finland on so excellent a law when wolves are about houses, villages and can intercept children to school. Still, it's quite an original ploy to put down research that demonstrates when wolves can be a danger to life and limbs.
- It must be proven that the wolf was never kept in captivity in its entire life, and there must be eyewitnesses to the attack. One wonders what policemen charged with a murder investigation would think of such conditions.
- It's not verifiable, therefore it must be dismissed. The vast destruction of records during war times and revolutions is a lamentable condition over much of Europe. Indirect verification, as described below, is the only way to check on validity.

LITTLE RED RIDING HOOD IS BASED ON REALITY.

Hans Friedrich von Flemming addressed his encyclopedic work “*Der Vollkommene Teutsche Jäger*” (The fully experienced German hunter) to his Mighty Sovereign and Master, Friedrich Augusto, King of Poland in 1719, followed by a second volume in 1724. This massive two-volume work on wildlife and its management was published in Leipzig, Saxony, Germany. I possess the 1749 version of these tomes. It was one of two successful attempts at generating a comprehensive account of all matters pertaining to the wildlife and nature of north central Europe in a highly organized encyclopedic fashion⁷⁹. This work, with closely spaced letters covers over a thousand pages, and is illustrated in encyclopedic fashion. Even by modern standards the species accounts, written in a terse, factual manner are remarkably accurate and I have cited Flemming on aspects pertaining to deer biology in my 1998 book *Deer of the World*⁸⁰. Flemming was a well-traveled nobleman and manager of estates. He lived shortly after the devastation of the 30-year War, and was thus all-too familiar with the problems caused by wolves during that period (see quote from Grzimek’s encyclopedia below).

Flemming’s account of the wolf is dry and to the point. He considers wolves a punishment sent by God. As he does for the deer species, he gives a good review of the wolf biology and continues on to describe tersely the severe problems wolves cause, the fact that during war times when wolves are little persecuted they are especially dangerous, that wolves follow armies, that taming and keeping wolves leads to such wolves destroying livestock, that wolves are dangerous to children, that man-eating wolves are often ageing individuals, that a strong man can put up an effective resistance to a wolf, that wolves are shy and can be cowed by a brave man, as well as that some people died some time after being bitten by wolves. He wrote much more than that about wolves. Aside from the biology, he thus illustrates the wolf in some detail as a dangerous animal. Consequently, he spent a lot of space on the means and ways of controlling wolf numbers.

Is von Flemming to be trusted?

What motivation might he have had informing his sovereign accurately about the life history of all species of wildlife and their relation to man, and then misinform him about wolves?

How could he dare basing his exhaustive account on the very expensive and time consuming means of controlling wolves on a lie?

Controlling wolves in Flemming’s days was a huge, capital and manpower intensive operation, requiring miles of netting, specialized net-carts, big drying sheds for storing and drying nets. It required whole villages who were conscripted under threat of punishment to do the driving so as to capture wolves. It disrupted economic activities and reduced taxes. How could one afford such based on a lie about wolves?

How could Flemming have gotten away with a lie of such importance? Had wolves been harmless, it would have been known, and well known by the emperor who watched over his treasury and whom informants surrounded.

Nobility was then very much enamored of wildlife, and their professional foresters then were excellent wildlife managers, as we know from the red deer antlers of the day still hanging on castle walls and the detailed records kept of hunt books. Flemming's encyclopedia reveals an astonishingly comprehensive knowledge base of very practical knowledge about all wildlife. These people knew all too well why the wolf was to rural serfs the very embodiment of terror. Grzimek's Encyclopedia puts it this way: "*since a break-in by wolves into a cattle stall could mean an economic catastrophe for the owners, who could not then pay their tithe or could produce their necessary winter supplies (of meat) for salting. After the Thirty Years' War, wolves multiplied and often prevented new settlements*"⁸¹. We find almost the same conditions in reviewing wolves in Russia⁸².

Flemming's experiences arose in the very heartland of the brothers Grimm fairy tales, *Little Red Riding Hood* included. The famous fairy tale was thus based on very real events and was not a case of ignorant superstition. It served as a valid warning to parents and children not to enter the forests containing wolves and be on the lookout for such. Man-killing wolves were a real threat and the society of the day did what they could to keep the danger minimal even though controlling wolves was very costly and met with little success. Even then it was known that wolves did thrive in wilderness settings, and, consequently, that destroying wilderness by turning it into meadows, cultivated fields, orchards, villages and towns robbed the wolf of living space. Wolves and wilderness were treated both as enemies of humanity in that area and time span.

Strychnine was invented shortly after Flemming and led to a severe drop in wolf numbers by the time of the French Revolution. Napoleon's defeated army marching back from Moscow had wolves following which restored the wolf plague again till about 1850. Wolves were largely extinct by about the First World War in western and central Europe. However, when wolves were prevalent in the 19th century in Germany they continued to kill people. Thus in 1820 the grand duchy of Posen in Prussia reported 19 adults and children killed by wolves⁸³. Trying to explain everything as the attacks by rabid wolves⁸⁴ still means that the presence of wolves is very dangerous if rabies is indigenous. If only rabid wolves had been dangerous, then Flemming could not have known that wolves became especially dangerous once they tasted human flesh, or that an attacking wolf could be intimidated, or that wolves selected children. Rabid wolves bite indiscriminately, do not feed on their victims and cannot be intimidated.

Flemming's encyclopedic treatment of wolves, does much more than verify the validity of the *Little Red Riding Hood* fairy tale, it sets a pattern of expectation when reviewing other authors writing about wolves. *Brehm's Tierleben*, a popular encyclopedic treatment of Animals published almost 200 years later paints a picture similar to Flemming and cites statistics on humans killed by wolves in Germany. The 1975 English version of *Grzimek's Encyclopedia*, acknowledges the European historic past, but emphasizes that “

In North America, wolf researchers, hikers and campers have nothing to fear from wolves". The authors also use here as their basis the thorough review of Dr. Doug Clark, formerly Chief of the Fish and Wildlife Branch, Ontario Department of Lands and Forests, which was also used by Pimlott. Clark was skeptical of reports of wolf attacks as his experience was much as my own in the Canadian continental wilderness, namely, of very shy wolves.

However, long before the Red Riding hood tale, wolves had fearsome roles in the Nordic mythology⁸⁵. In the pre-Christian Germanic conceptions of gods and their fate, Fenrir, a giant wolf was preordained to kill the mightiest of gods, Odin, during the final cataclysm, Ragnarök. Never mind that the wolves Fenrir and Geri were created and nurtured by Odin, and were his close companions throughout. The trickster Loki, was punished by the gods for the murder of one of them, Balder, by having one of Loki's children, Vali, turned into a wolf who then killed his sibling, Narfi, whose guts in turn were used to tie Loki to a rock, and inflict punishments on him till Ragnarök.⁸⁶ Apparently, even the ancients knew that wolves may turn on their parents and siblings and kill them. This, however, can be contrasted against the ancient image of feral children raised by wolves such as Romulus and Remus in the Roman saga, or Rudyard Kipling's Mowgli in modern fiction. However, even here the "wolf children" act rank-sensitive, like wolves, as Romulus dominates over his brother Remus and kills him.

RUSSIAN, FINNISH, INDIAN, KOREAN AND OTHER WOLVES.

Most reports of problem wolves come from Russia and Finland. However, the language barriers were formidable. The relevant books by Bibikov and Pavlov are still not translated totally into English, and the wolf section in the *Mammals of the USSR* became available in English only in 1998. A book manuscript by an American linguist, Will Graves, came into my hands. Graves, after his transfer to Moscow, began reading about wolves in order to improve his language skill. A hunter and outdoorsman he quickly became aware that the Russian literature on wolves differed greatly from the modern one in North America. He was permitted to travel and he met with Russian scientists studying wolves, Bibikov and Pavlov included, he met with and talked to editors of wildlife publications, book authors, but also with hunters and herdsman in the field, including survivors of wolf attacks. A significant finding of his is that there were five peaks of high abundance of wolves in Russia in the past 150 years. Each high was followed by government efforts to reduce wolves and each low was followed by neglect till wolf numbers rose again to unacceptable levels. He could not find an outlet for his manuscript, which deals widely with wolves in Russian culture, including a rich collection of proverbs. I found the book valuable and after editing it the manuscript was accepted and published by a Canadian academic publisher (2007, *Russian Wolves. Anxiety through the Ages*. Detselig, Calgary. Pavlov's translated chapter 12 is Appendix A in this book⁸⁷, and is Appendix A in this report).

The important material from Finland became available in English through the efforts of Magnus Hagelstam, as the current return of wolves to Finland is raising old, but well-founded safety concerns. What is most significant is that trained historians have

examined the historical killings of children by wolves and found such reports valid. I have appended correspondence and position statements to this report (see Appendix G⁸⁸).

In addition Indian scientists dealt with the problem of child killing wolves in India, a problem of some significance⁸⁹.

Collectively, the massive material pertaining to man-killing wolves from Russia, Finland, India and elsewhere⁹⁰, follows much the same pattern as in the German historical accounts by Flemming. I was able to contrast such against my personal experiences with “misbehaving” wolves on Vancouver Island⁹¹, as well as ongoing reports I am receiving on wolf incidents in areas where wolves are protected and expanding, namely in the United States (Yellowstone and New Mexico⁹²), in Sweden, Finland and most recently, eastern Germany. And then there are recent reports in Canada and Alaska of wolf attacks on people⁹³. To this we can add what some native people understood about wolves^{94, 95}. Collectively, this material, as well as specific studies in animal behavior⁹⁶, allows us to pinpoint precisely the conditions in free-ranging which wolves are dangerous to people, as well as when free-ranging wolves are utterly harmless. About the fact that captive packs of wolves or wolf hybrids can be dangerous, there is no dispute⁹⁷.

The Korean experience is reviewed by Robert Neff in an article, *Devils in the Darkness*, published in June 2007. It gives grim statistics and does show that wolves become dangerous under conditions of helplessness by a rural population⁹⁸. I have covered similar matters pertaining to wolves in Afghanistan, Turkey and Iran in various end-note commentaries.

UNDER WHAT CONDITIONS ARE WOLVES NOT DANGEROUS TO HUMANS?

Wolves are not dangerous when they are well fed, by virtue of successfully preying on abundant wild prey where they have either, very little contact with people, or where they are hunted. This is no novel conclusion⁹⁹. However, wolves can learn to avoid hunters and yet persist in attacking livestock. Wolves are also less dangerous to humans where there is an adequate buffer of readily available domestic livestock¹⁰⁰.

Therefore, to minimize danger to humans there needs to be (1) a low ratio of wolves to prey, and (2) an occasional, rare visit by humans or (3) a self-confident, fearless, even arrogant demeanor of persons traveling in areas with wolves. Such a confident, fearless way of walking and acting is associated with carrying arms. When we are armed we are sending a message of confidence and courage with our very movement. And that is intimidating to all large mammals I have worked with in my field studies as an ethologist. It is not the act of hunting or shooting that makes wolves and other predators weary, but the confident, self-assured manners of armed persons. Healthy wilderness wolves under these conditions are so shy and weary that they are not vulnerable to regular hunting methods, especially to stalking. It may be counterintuitive, but inefficient hunting is an excellent protector of large carnivores.

What must be avoided in the presence of wolves is running away, stumbling, limping as well as any sign of weakness, such as may be associated with an illness, or exhaustion. Making and keeping up eye contact is essential¹⁰¹.

We can surmise that the reason why healthy free ranging wolves feeding on native prey are of little if any danger to people meeting them is that adult wolves live in a hard cage of interlocking instincts and imprint-like learning. They will act on the dictates of those instincts and learning, and they will not attack potential prey that does not match what they learned during their long ontogeny. To attack new prey requires the dismantling of what they learned and a slow process of re-learning, guided by observational learning about the new prey and a very cautious approach to attacking. Wolves cannot risk being bold as they risk injury attacking an unknown prey species. The greater the discrepancy in appearance, sound and smell of the new prey between what wolves learned in their youth and what they encounter, the greater the resistance to exploring such as new prey. And that resistance increases should the new prey act bold, assertive and fearless. Nevertheless, wolves will explore humans as alternative prey, even if there is no food shortage, if they continually come in close contact with humans and habituate. It cannot be emphasized enough that habituation is but a stepping-stone towards fully exploring humans as prey. Habituated wolves will, eventually attack, as the next step in exploration, in making the unknown known. This is a principle of exploratory behavior applicable to all animals, not only to wolves.

UNDER WHAT CONDITIONS ARE WOLVES HIGHLY DANGEROUS TO HUMANS?

Wolves become dangerous when they run out of food, be it by depleting prey, or by encountering difficulties in hunting by virtue of old age, or young age and lone status and low social rank, or due to illness, or due to injury inflicted by a hunter, or by reacting to a scream of a wounded pack member and attacking, or by mistaking the human as prey. Well fed wolves can also become dangerous, but under conditions where they take advantage of a rich feeding opportunity that – constantly – brings them into close contact with humans. This can happen at garbage dumps and on campgrounds. However, a necessary condition for attacks to occur is the *de facto* or *de jure* protection of wolves. When these conditions are met, wolves begin to explore humans as alternative prey.

HOW DO WOLVES EXPLORE FOR ALTERNATIVE PREY?

A brief departure into theory is required here: all organisms – no exception – act so as to live in predictable surroundings and circumstances. **Predictability** is here key! The main reason for that is that under most conditions energy and nutrients for maintenance, let alone reproduction, are difficult to acquire, and are digested, metabolized into growth or work quite inefficiently. The **cheapest** way to live, which is the way by which the organism may set aside and store enough energy and nutrients for reproduction, is to live under utterly predictable circumstances. To make the environment predictable, organisms have mechanisms of exploration and the manner of making the unknown known is

remarkably similar be the organisms mice, sheep, wolves or men. It is a process of little excursions into the unfamiliar followed by a quick retreat into familiar where the animals dwells mostly, till it sums up its “courage” to do a bit more exploration. The manner of the wolf exploring and becoming familiar with new prey happens to be exceedingly slow and proceeds in stages over along time, as the wolf, by nature, is – and needs to be - exceedingly timid. When confronting an unknown prey, the last exploration by a wolf is to attack¹⁰².

THESE ARE THE 7 STAGES LEADING TO AN ATTACK ON PEOPLE BY WOLVES.

- 1) Within the packs territory prey is becoming scarce not only due to increased predation on naïve prey animals, but also by the prey evacuating home ranges en mass, leading to a virtual absence of prey. OR Wolves increasingly visit garbage dumps at night. We observed the former in summer and fall 1999. Deer left the meadow systems occupied by wolves and entered boldly into suburbs and farm, causing – for the first time – much damage to gardens, sleeping at night close to barns and houses, which they had not done in the previous four years. The wintering grounds of trumpeter swans, Canada geese and flocks of several species of ducks were vacated. The virtual absence of wildlife in the landscape was striking.
- 2) Wolves in search of food began to approach human habitations – at night! Their presence was announced by frequent and loud barking of farm dogs. A pack of sheep-guarding dogs raced out each evening to confront the wolf pack, resulting in extended barking duels at night. The wolves were heard howling even during the day.
- 3) The wolves appear in daylight and at some distance observe people doing their daily chores. Wolves excel at learning by close, steady observation¹⁰³. They approach buildings during daylight.
- 4) Small bodied livestock and pets are attacked close to buildings even during the day. The wolves act distinctly bolder in their actions. They preferentially pick on dogs and follow these right up to the verandas. People out with dogs find themselves defending their dogs against a wolf or several wolves. Such attacks are still hesitant and people save some dogs. At this stage wolves do not focus on humans, but attack pets and some livestock with determination. However, they may threaten humans with teethe exposed and growling when these are defending dogs, or show up close to a female dog in heat, or close to a kill or carryon defended by wolves. The wolves are still establishing territory.
- 5) The wolves explore large livestock, leading to docked tails, slit ears and hocks. Livestock may bolt through fences running for the safety of barns. The first seriously wounded cattle are found; they tend to have sever injuries to the udders, groin and sexual organs and need to be put down. The actions of wolves become more brazen and cattle or horses may be killed close to houses and barns where the cattle or horses were trying to

find refuge. Wolves may follow riders and surround them. They may mount verandas and look into windows.

- 6) Wolves turn their attention to people and approach such closely, initially merely examining them closely for several minutes on end. This is a switch from establishing territory to targeting people as prey. The wolves may make hesitant, almost playful attacks biting and tearing clothing, nipping at limbs and torso. They withdraw when confronted. They defend kills by moving towards people and growling and barking at them from 10-20 paces away.
- 7) Wolves attack people. These initial attacks are clumsy, as the wolves have not yet learned how to take down efficiently the new prey. Persons attacked can often escape because of the clumsiness of the attacks. A mature, courageous man may beat off or strangulate an attacking wolf. However, against a wolf pack there is no defense and even two able and armed men may be killed. Wolves as pack hunters are so capable a predator, that they may take down black bears, even grizzly bears¹⁰⁴. Wolves may defend kills.

The attack may not be motivated by predation, but be a matter of more detailed exploration unmotivated by hunger. This explains why wolves on occasion carry away living, resisting children, why they do not invariably feed on the humans they killed, but may abandon such, just as they may kill foxes and just leave them, why injuries to an attacked person may at times be surprisingly light, granted the strength of a wolf's jaw and its potential shearing power¹⁰⁵.

NORTH AMERICAN STUDENTS OF WOLF BIOLOGY HAVE NO MEANS OF PREDICTING WOLF ATTACKS ON HUMANS, BUT STUDENTS OF COYOTE BIOLOGY DO!

A similar, predictable progression as above has been, independently, described for urban coyotes in California involved in attacks on children¹⁰⁶. It is a pattern in which coyotes shed shyness, become increasingly bolder and killers of pets, till they finally target and attack children in urban areas. Wolves follow the same basic pattern as coyotes, signaling their intent of attacking humans a long time before it happens. That is, wolves and coyotes go through repeated and predictable pre-attack behavior. It is very similar as both species have the same way exploring, of making the unfamiliar, familiar.

North America expertise in attacks of wolves on people is not merely slim, but experts are in a state of denial. They have created the lore of the harmless wolf that hurts no people, and consider that the *Little Red Riding Hood* tale is based on myth and superstition. Are attacks on children by urban coyotes mere myth and superstition?

EXPLORATION AND OTHER INTERACTIONS

The above does not exhaust wolf-human interactions. Wolves, and coyotes, may make honest mistakes. For example, one early December evening in 1965 I walked onto a

frozen lake, snow-covered dragging behind me laboriously the skinned carcass of a mountain sheep. Glancing up I saw three wolves, two beginning to encircle me in a wide arc, the third running straight at me at a hard run. I followed that wolf in the scope of my rifle as it swung away to circle me at about 15 paces distance. Within a few jumps it ran into my scent. The wolf tried to stop, flipped over backwards, scrambled to get to his legs and ran off as hard as he could. It was, clearly, a case of mistaken identity. One November evening I was slowly stalking looking for white-tailed deer through an aspen bluff in deep fluffy snow on the Wainwright military reserve in Alberta. My stalk in essence mimicked in its sound pattern a slowly browsing deer. Suddenly, there was a big cloud of snow and a commotion just in front of me in within a second I was surrounded by three coyotes. These stared up at me for a something like a count of three and then lit out into three directions, running as hard as they could. Mistaken identity. Hunters calling moose had wolves approach and jump very close to them. In several such incidents I was told the startled hunter shot the wolf. One did not and saw in surprise how the wolf lay down beside him and whined softly. A second wolf came and both watched the hunter at close distance before turning and running off. In two cases I was told wolves, unprovoked, suddenly saw and ran towards the hunter, and were shot at very close range. Wounded wolves may rush the hunter, as I can attest to. Also, a pack of wolves hearing the scream of a poorly hit wolf may charge the hunter. Some wolves are readily food habituated. Single wolves without a pack may become quite tame and very tolerant of people while trying very hard to form bonds with dogs. I observed such a case involving the last survivor of a misbehaving pack, which had been destroyed by a conservation officer or shot by farmers and hunters. I watched this lone male wolf successfully fraternized with a pack of five sheep guarding dogs, which his pack had previously opposed. This wolf was killed a few months later on March 12th 2003 while sitting within the pack of dogs. The antics of a lone wolf near Juneau, Alaska, picking up small dogs and carrying such away and approaching people with dogs is probably such a case in point, a very lone wolf trying to link to some company¹⁰⁷.

Although wolves may be “hard wired” via instinct and imprint-like learning during their long ontogeny, they retain the drive to explore novelty. Even though exceedingly shy of humans’ wolves often followed my tracks in the snow, occasionally right to my cabin. I would find where they sat in the snow close to the cabin, apparently listening to what was going on inside. Grizzlies did the same. Early explorers of the prairies reported that wolves, which had had no experience with Europeans previously, approached closely to watch and steal articles out of camp. We now understand that there was little danger to people as these wolves were still under the spell of their “hard wiring” which takes time to dismantle and readjust to new prey. Yet this persistent if hesitant exploration is essential for wolves to safely take advantage of feeding opportunities as they arise. It’s a universal drive in animals.

If one links “hard wiring” to the success of wolf packs bringing down prey as dangerous as black bears and grizzly bears, let alone a hapless human, how can one expect that wolves “*be conserved in multi-use landscapes surrounding houses, farms, villages and cities*”?

COMMON FALLACIES

The report by Linnell et al. 2002 entitled *The Fear of Wolves*, of the Norwegian Institutt for naturforskning or NINA, is a very interesting document. It makes some good recommendations, but in its attempts to placate its client's fears, it states in essence that attacks by wolves are very rare indeed. That is, the reader should go away in the conviction that there is little, if anything to fear from wolves. **This is the fallacy of incorrectly assessed probability as I indicated earlier.** The correct way to inform the client would be to state that if **conditions** a, b, c, d and e are fulfilled, then the chances of a wolf attacking humans are minuscule. Conversely, if **conditions** f, g, h, I, k and j are present, the attacks by wolves on humans are a certainty - and let the client decide.

Therefore, at the pain of being redundant, the chances of attacks on humans are virtually Zero if:

- a) Wolves are absent or very rare – as they were in North America during much of the 20th century.
- b) Wolves are hunted in an ongoing fashion, which abundant experience and a behavioral analysis leads us to believe makes them extremely shy of humans and, secondly, sick – but especially - habituating wolves are removed in an ongoing manner.
- c) Wolves have an abundance of diverse, natural prey and there is no chance of opportunistic habituation to a human-made, rich food source such as kitchen wastes in open garbage dumps, or campsites where campers feed wolves.
- d) Where wolves, after depleting natural prey, have access to abundant livestock and pets.
- e) There is no opportunity of wolves contacting rabies, because rabies is not endemic to the land and where wolves have little opportunity to hybridize with dogs.
- f) Where wildlife managers, game wardens or park wardens are aware of what constitute conditions to keep wolf attacks low, actively manage for such, and keep the affected humans alerted as to what constitute signals of danger.
- g) Where persons meeting wolves avoid signs of weakness, fear, unsteadiness and illness, but act bold, calmly and resolute when confronting wolves. Withdraw facing the wolves and do not turn your back!

Conversely, the chances of wolves attacking humans is very high or nearly certain where:

- h) Wolves are very abundant.
- i) Wolves are protected *de facto* or *de jure* and do not experience humans as hunters.
- j) Where natural prey populations are declining in abundance and diversity.

- k) Where there are opportunities to feed regularly on a rich food source such as a garbage dump filled with kitchen wastes, or easily hunted alternatives to natural prey, such as pets and livestock.
- l) Where populations of domestic livestock are sparse, and cannot maintain wolves for any length of time¹⁰⁸.
- m) Where “experts” inform people that wolves are harmless and pose no danger, and are lulled into a false state of security.
- n) Where wolves are emboldened to visit human habitations, approach humans closely in order to observe humans at leisure and get away with maiming and killing pets or livestock.
- o) Where wolves are not deterred after attacking and being only temporarily dissuaded, while the victim is criticized and blamed and the misbehavior of wolves is explained away in some “scientific” fashion.
- p) Where persons meeting wolves run away, look away, turn their back, show signs of fear, physical unsteadiness or illness.

Under above conditions the chances of a lethal attack by wolves on humans is virtually unavoidable!

As second, even lethal fallacy is **to invoke incorrectly the prestige of science** in order to mollify people about wolves. This is done by insisting that reports such as that by Linnell et al. 2002 are “scientific”. It is perfectly true that the report was written by scientists. However, a report written by scientists does not make it automatically “scientific”! Let me put it this way: Just because a scientist sings a song, does not make the song “scientific”! The records on wolf attacks on humans is in the domain of historians, which have the technical training and scholarly attitude to deliver sound assessments after examining such material. Their manner of proceeding and reaching conclusions is totally different from that of scientists¹⁰⁹, and leads nevertheless to perfectly valid conclusions. See for instance the wonderful book by a historian, the *North American Buffalo* (1951) by Frank Gilbert Roe¹¹⁰. Scientists can act as intelligent, able laymen and reach perfectly sound conclusions, but it behooves them to know their limitations and not invoke the prestige of science when it is not warranted. Also, and as indicated above, I find the report lacking in elementary science of animal behavior, which leads me to another fallacy.

The fallacy of “the absurd good”. It is common in the literature arguing for the conservation and especially the reintroduction of wolves, to read that healthy, wild wolves do not bite people, rabid ones do! Don’t falsely blame healthy wolves! Even if healthy wolves were utterly harmless, which they are not, just how is it reassuring to know that being bitten by a rabid wolf was really not the wolves fault, but the fault of the rabies virus! Is the risk of being bitten by a rabid wolf a superior condition to not being bitten at all? If having wolves - where there were none before - only increases the risk being bitten by a rabid wolf, why introduce wolves in the first place? Rabies is a widespread epizootic in small carnivores and bats, which is on occasions transferred to wolves. In what way is rabies epizootic with wolves superior and socially more desirable to an epizootic of rabies without wolves? How are we to take comfort from the fact that

rabid wolves bite people and healthy ones do not? Is it not better to be bitten by a healthy wolf than a rabid one, and best of all not being bitten at all? *Ratio ad absurdum!*

The very same concerns are valid for the assurance – if one can call it such - that not genetically pure wolves are dangerous, but those hybridized with dogs are. Since all canids hybridize, let alone domestic dogs and wolves¹¹, is not the influx of wolves a way to generate additional dangers through wolf/dog hybridization?

The “wonderful ecosystem fallacy” It is argued that wolves are needed to restore the “ecosystem” and “ecosystem functions” and that this is an instantly comprehensible, utterly self-evident relationship of nothing less than the *highest* value ecological and social! And should one have the slightest doubt, than it exposes one instantly as “unscientific” and illiterate. Still, I beg to differ. In my career as an environmental scientist I have heard this claim more often than I care to remember. Yet when I asked what is meant by that argument, the result was invariably confusion and inability to answer. Of course there are effects, primary and secondary, of wolves establishing themselves where they had not been before. However, in restoring ecosystem diversity the ecosystem effects of wolves need to be contrasted against the ecological, conservation and social, costs and especially which segment of society has to bear such costs. I suggest, for instance, that in completing the ecosystem and bringing missing carnivores into contact with herbivores, soon leads to the re-establishment of diseases and parasites previously missing. These diseases and parasites require both, the herbivores and carnivores to complete their life cycles. Is the spreading of lethal diseases with the spreading of wolves in “*multi-use landscapes surrounding houses, farms, villages and cities*” such an obviously wonderful idea that one can insist on proceeding and let the affected citizen bear the cost? And, pray tell me, where has that been considered prior to the reintroductions of wolves? Likewise the promise of making wolves and livestock herding compatible via fencing and packs of guard dogs, does not consider detrimental side effects. Fencing that excluded wolves also excludes all big game leading to a loss of habitat for the wild prey of the wolves. Secondly, fencing allows pack-hunting canids to effectively corner prey against fences and kill it. It enhances the hunting efficiency of wolves. With the depletion of natural prey and the unavailability of livestock, wolves inevitably must target humans. Moreover, wolves dispersed through cultural landscapes cannot but fraternize and hybridise increasingly with dogs. That is spreading wolves into “*multi-use landscapes surrounding houses, farms, villages and cities*, cannot but lead to a destruction of wolves as a valid zoological form through hybridisation. Is that an acceptable goal of wolf conservation?

The “balance of nature fallacy”. Wolves are required in order to maintain “balance” in the ecosystem, so that the ecosystem can “regulate” itself. This argument is based on inability to distinguish between negative and positive feedback. Our bodies are regulated by negative feedback. Ecosystems run by positive feedback. That is, ecosystems are not “regulated”, as positive feedback has no means of “going back on itself” as negative feedback does. Your blood sugar levels are “regulated” in a classical negative feedback loop. Animal populations are not. They do however, grinding up against one another, grow or decline, each population being on positive feedback, as if trying to grow. This

can lead to a stalemate that superficially looks like “regulation”, but is not. Introducing wolves into this discussion is thus empty rhetoric void of meaning.

The “wilderness fallacy”. To round out the list of fallacies, the wilderness fallacy must be quickly dealt with. It is another North American introduction into global culture. It is based on the conventional wisdom that pre-Colombian America was a virgin wilderness with very few natives, which practiced a wise ecologically sustainable lifestyle - a patronizing picture of indigenous people as noble savages if there ever was one. The Archeological record teaches otherwise, namely, that the Americas - as were all continents inhabited by humans - were fully utilized by sophisticated cultures and regionally dense populations. When European diseases and genocide rapidly diminished native populations, and the heavy hand of red man came off the land and led to an explosion of “wilderness”. This wilderness was in turn subdued beginning about 250 years later by the even heavier hand of white man. **Wilderness in the North American context is an artifact of European colonization.** There is no such thing as a continent-wide pre-Colombian American wilderness. To automatically invoke “wilderness” values is much like invoking “ecosystems” values. In reality this requires some very Socratic questioning and debate, whether “*wilderness*” should be spread in “*multi-use landscapes surrounding houses, farms, villages and cities*”!

¹ While the view of “harmless wolves” was first popularized in Lenin’s and Stalin’s Communist Russia apparently to justify keeping the rural population disarmed, it was subsequently developed independently in North America, and it is the North American version which was transplanted to Europe. See Appendix A. Pavlov’s chapter in Will N. Graves 2007 *Russian Wolves. Anxiety through the Ages*. Detselig, Calgary, Alberta, Canada. In Eurasia Wolves are continually involved in attacks on humans as is reported in an ongoing fashion by news sources in Russia, Kazakhstan, Uzbekistan, India, Asia Minor or Korea. For instance: “On the arid steppes of western Uzbekistan, some 20 villagers have been reported injured by wolves in five months. Two of them -- in the Muinak District -- died in early February as a result of their wounds” Radio Free Europe, March 15th 2005, Central Asia: in a story entitled *Cohabitation Of Wolves, Humans Proves Difficult*.

² See Part II

³ pp. 29-30 of National Wildlife, February/March 2007 edition in an article entitled “Sexy Beasts”. by Paul Tolmé we read: “Wolves remain a bogeyman today, as illustrated by the death of a Canadian man in 2005. When Kenton Carnegie’s mangled corpse was discovered near a remote Saskatchewan mining camp of Points north Landing, the Royal Canadian Mounted police immediately blamed wolves. The story made headlines around the world. But when noted wolf biologist Paul Paquet of the World Wildlife Fund investigated, he recognized immediately that a black bear killed Carnegie. “*The problem was bias right from the start,*” Paquet says. “*When I looked at the photos, I immediately saw bear tracks,*” Paquet says.” I have shown in the affidavit that these, and other statements pertaining to this case, by Paul Paquet are in error.

⁴ See James Gary Shelton 1998 *Bear Attacks*. Pogony Productions, Hagensborg, BC. Shelton makes a point of how viciously victims of predatory attacks have been pursued and maligned in Canada and the US by enumerating such in some detail.

⁵ At a symposium on habituation of wildlife of The Wildlife Society in Madison, Wisconsin, on Sept. 27th 2005 it was disclosed that in Arizona, the wildlife department was halted from removing a dangerous

cougar from a populated area by a large crowd of animal rights defenders carrying signs that read, among others that it is an honor to be killed and eaten by a cougar.

⁶ Mark E. McNay 2002. Wolf-human interactions in Alaska and Canada: review of the case history. *Wildlife Society Bulletin* 30(3):831-843.

⁷ In North America the threat of predation is greatly underrated, including in academia. For instance, why should North America be colonized by humans some 50,000 years after Australia was colonized? Humans had 50,000 years ago some capacity to explore coastlines and cross stretches of open ocean. The most likely answer is that North America's megafauna and its gigantic predators kept humans out of North America, so that humans could colonize this continent only after the collapse of North America's native fauna at the end of the last Ice Age (See Geist, V. 1989. Did predators keep humans out of North America? In J. Clutton-Brock (ed.) *The Walking Larder*. (Proc. Theme 1, Section 4, World Archeological Congress, Sept. 1-7, 1986.) Southampton. Unwin Hyman, London. pp. 282-294.

⁸ Russell J. Rutter and Douglas h. Pimlott 1968 *The World of the Wolf*. Lippincott C. New York. See pp. 16-28 *Wolves as symbol of evil*. and pp. 29-42 *War on wolves*.

⁹ David L. Mech 1970. *The Wolf*. The Natural History Press, Garden City, New York.

¹⁰ See Appendix D. Bruce Hampton, 1996, Sharks of the Plains: Early Western Encounters with Wolves. *Montana: The Magazine of Western History*. Vol, 46. No. 1. (www.wolfology.com. Item # 1318).

¹¹ Mark E. McNay 2002. *ibid*.

¹² Dr. Ludwig Carbyn, Canada's outstanding wolf biologist, worked fruitfully for years with habituated wilderness wolves in Jasper and Wood Buffalo National Parks. Lu Carbyn (2003) *The Buffalo Wolf*. Smithsonian Books, Washington.

¹³ For an account of how rabid wolves act see Chapter 6, Wolf Attacks on Humans by Will Graves (2007) *Wolves in Russia*, Detselig, Calgary. Pp 87-103.

¹⁴ Henryk Okarma 1997 *Der Wolf*. Parey Buchverlag, Berlin See p. 130. What is remarkable here is that Okarma, a Polish biologist, falls in line with the skepticism expressed by North American scientists about historical records. However, he does present Pavlov fairly, but is reluctant to accept it as Pavlov's facts could not be scrutinized independently.

¹⁵ Due to rising numbers of confrontations between wildlife and humans, The Wildlife Society organized a symposium on *habituation* in Madison Wisconsin in September 27th 2005. I was invited to give a key note address, the text of which is appended here as a Appendix B. I was subsequently invited to write an article on habituation for the first issue of the new Journal produced by the Wildlife Society. See Geist, V. 2007. How close is too close? *The Wildlife Professional* 1/1: 34-37

¹⁶ Lu Carbyn *ibid*.

¹⁷ See Appendix C, a historical perspective on wolves in North America.

¹⁸ Wolf Park *Guidelines for keeping wolves and wolf-hybrids* Hary Frank (ed.) 1987. Man and Wolf. Kluwer Academic Publishers, Dordrecht, The Netherlands. Raymond Coppinger and Lorna Coppinger 2001, *Dogs*, Scribner, Simon & Schuster, New York. See Part I dealing with a contrast of wolf and dog characteristics. Jerome H. Woolpy and Benson E. Ginsburg. 1967. "Wolf Socialization. A study of Temperament in a Wild Species". *American Zoologist* 7:357-363.

¹⁹ This is about a lone Alaska wolf called Romeo who is trying to make social contact and is stealing dogs without injuring such. http://www.juneauempire.com/stories/020807/loc_20070208018.shtml.

²⁰ See Geist, V. 2003. Vancouver Island wolves. *The Virginia Wildlifer*, June 2003, pp. 35-39. Appendix C.

²¹ August 24, 2007.

²² Quoted from C. D. C. Linnell et al. 2002 *The Fear of Wolves*, Norse Institutt for Naturforskning. NINA Oppdragsmelding 731, Trondheim, Norway. ISBN 82-426-1292-7.

²³ On the morning of the 26th of March 2007 a pack of five wolves threatened our neighbor and his wife as they attacked his dog about 400 yds from my neighbors' and my residence. The following morning the wolf pack came again for my neighbor, his wife and dogs, but my neighbor was armed and shot the most aggressive wolf. Presumably this very pack also met another neighbor on the 26th and chased his dog back to him.

²⁴ Ibid Geist 2003.

²⁵ The March 26-27 incident reported above, was reported in the local paper and on local television, and is the only incidence from many that was reported on in the news media. Julia Caranci 2007 Beware of wolves. *Alberni Valley Times*. Wednesday, March 28th 2007 p. 1.

²⁶ Ibid. Geist 2003.

²⁷ See Appendix E, a report by the Canadian Broadcasting Corporation of responses by the listening public to their airing of the Kenton Carnegie case. Here is an account of cases of Wolf/Human interactions that were never aired by the Canadian new media. <http://www.cbc.ca/sask/features/wolves/3.html> CBC Sakatchewan copied July 2nd 2006.

²⁸ The incomplete reporting of lethal wolf attacks on people greatly affects the Russian literature. See the commentary by S. Korytin and Pavlov in Appendixes F and A, respectively.

²⁹ McNay 2002 took the quote from Mech L. D. 1998. "Who's afraid of the big bad wolf?" Revisited. *International Wolf* 8(1):8-11.

³⁰ Janice Koler-Matznick 2002 The origin of the dog revisited, *Anthrozoös* 15(2)98-118.

³¹ Wolf Park Guidelines, *ibid*.

³² J. Beatty. 2000. Vargas Island wolves too used to human contact, observer says. *The Vancouver Sun*, July 5th, pp. A1-2.

³³ Port Moody kayaker fights off starving, predatory wolf. By: Larry Pynn, *Vancouver Sun* August 1, 2007

³⁴ Linda Wilson Fuoco and Chico Harlan, *Wolf dogs kill owner, autopsy determines*. Wednesday, July 19th 2006, Pittsburgh Post-Gazette.

³⁵ Book Title: "The Wolf in Game Management"; Author: Mikhail P. Pavlov; Date of Publication: First edition 1982, 2nd edition 1990; Publisher: Agropromizdat, Moscow; Chapter 12, "The Danger of Wolves to Humans" (pp 136-169); Translated from Russian by Valentina and Leonid Baskin, and Patrick Valkenburg.

Edited by wildlife biologists Patrick Valkenburg and Mark McNay. Dr. Leonid Baskin is a well-known Russian zoologist with whom I have worked and co-published in the past. **Appendix A.**

³⁶ Elis Pålsson 2003 *Vargens Näringssök och Människan*. ISBN 91-631-3651-1, Älmhult.

³⁷ See Mark E. McNay 2002.

³⁸ David Mech and Doug Pimlott relied on the thorough work of Dr. Doug Clark, Chief of the Fish and Wildlife Branch of the Ontario Department of Lands and Forests. In an unpublished paper entitled “*The Beast of Gévaudan*” he concluded: “*Down the long list of recorded attacks by wolves it becomes clear that the Russian baron in his troika is folklore, but the rabid wolf is grim fact. The pattern is universal. The famous wolves of medieval song and story were all rabid*”. P. 26 of Rutter and Pimlott 1968.

³⁹ C. D. C. Linnell et al. 2002 *The Fear of Wolves*, Norse Institutt for Naturforskning, NINA Oppdragsmelding 731, Trondheim, Norway. ISBN 82-426-1292-7.

⁴⁰ See this official EU document: http://ec.europa.eu/environment/nature/pdf/large_carnivores.pdf.

Page 24: As we have seen **large carnivores** as a species group **represent a number of unique challenges when we try to conserve them in crowded, human-dominated, and heavily modified ecosystems like Europe’s**. These challenges include **their potential to have locally severe impacts** on (1) livestock, (2) prey species which represent valuable game resources for hunters, (3) the fear they induce in many people, (4) their association with a wide range of social conflicts, and (5) the fact that **in very rare events wolves and bears can represent a threat to human safety by attacking people and where wolves can act as vectors for diseases such as rabies** (Kaczensky 1999; Linnell et al. 2002, 2005; Skogen 2003; Skogen & Krange 2003; Swenson et al. 1999). For many conflicts there are **a wide range of potential mitigation measures** that may serve to reduce conflict levels. For example, there are many modern and traditional methods to help protect livestock against depredation from large carnivores. **Electric fences and the use of shepherds with livestock guarding dogs** are two methods that have been shown to **be particularly effective under a wide range of conditions. Social conflicts and fear may be, at least in part, reduced through the development of education campaigns and various forms of communication structure.**

Page 67: “While large areas of Europe presently offer potentially suitable habitats for one or more of the large carnivore species beyond their present reduced distributions, there are no large wilderness areas left in Europe. Therefore, **large carnivore conservation must often occur in multi-use landscapes. Within such landscapes a variety of real or perceived conflicts with humans can occur, including:**

- (1) **Depredation on livestock and other productive units,**
- (2) **Competition with hunters for wild ungulates,**

(3) **Fear for personal safety (especially from bears and wolves) and other psycho-social conflicts.** It appears to me that this is grasping at straws. If one cannot have in Western Europe large wilderness parks where wolves can be conserved, than there will be such in Eastern Europe, Siberia, Central Asia and North America. Secondly, the mitigation measures available not merely discourage wolves from killing livestock, but also impact other big game populations, such as roe deer, red deer, wild boar etc. The more wolf-proof fences are erected the more habitat is removed where other large game can exist. Secondly fencing favours carnivores cornering game and killing it as we experienced here in Canada in Banff National Park, leading to the extermination of a bighorn population. Having guard dogs in large numbers guarding sheep in public areas is death on wildlife due to harassment, as I have amply experienced here close to my home. Moreover, with the depletion of wild prey, and the unavailability of livestock, wolves cannot but target humans. That’s inevitable. Moreover, what negative conditioning will work in the absence of prey? Also, how will one prevent hybridisation with so many guard dogs in the landscape and the propensity of outcast wolves to fraternize with dogs? While Europeans developed a wolf-free landscape and have subsequently learned to integrate agricultural and hunting economies, the introduction of large carnivores reverses all that – without ultimate benefit to carnivores. They will become just as hated then as they were in the past and they will, eventually, be exterminated – again! Read about the Russian off –on struggles in Grave’s book!

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- ⁴¹ Baker, R. O. and R. M. Timm 1998. *Management of conflict between urban coyotes and humans in southern California*. Pp. 229-312 in R. O. Baker and A. c. Crabb eds. *Proc. 18th Vertebrate Pest Conference*, University of California, Davis
- ⁴² Janice Koler-Matznick 2002 *ibid*.
- ⁴³ Appendix G, Comments to the NINA report “*The fear of wolves*” by Magnus Hagelstam. Magnus.hagelstam@asiakashallinta.com +358-41-5453803; Suomen Suurpetohdistys ry, Konapintie 62, 88900 KUHMO, FINLAND, sami.vaisanen@kuhmo.net, 358-341-5453803
- ⁴⁴ Will Graves 2007 *Russian Wolves. Anxiety through the Ages*. Detselig, Calgary, Alberta, Canada.. Appendix A.
- ⁴⁵ Appendix F. E-mail correspondence between Magnus Hagelstam and NINA’s John Linnell 2.2. 207, 8 pp.
- ⁴⁶ The absence of wolves from California: I did rely on the very thorough historical treatment of Dale McCullough 1969, *The Tule Elk* U. California Press. p. 17. The wolf was missing from historically from more than merely central California. See also p. 414 in Young and Goldman 1944 part two. Wolves were not present historically in quite a large part of the West.
- ⁴⁷ See Mark E. McNay 2002 introduction.
- ⁴⁸ See also the excellent summary paper by Mark E. McNay 2002. *ibid*
- ⁴⁹ Katrina Outland, Who’s afraid of the big bad wolf. *Journal of Young Investigators* Vol. 11, Issue 5, November 2004.
- ⁵⁰ I have no evidence that his takes place beyond conversations in confidence. However, I do not doubt it as exterminating wolves by destroying dened pups in summer was found to be in Russia one of the most effective methods of wolf control. See pp. 268-269 in Heptner et al (1967) in *Mammals of the USSR*. English translation published by the Smithsonian Inst. Washington, DC..
- ⁵¹ Dr. Tom Bergerud wrote to me pertaining to rabies in wolves in an e-mail dated March 07, 2007:” *There is not much on wolves (in his book) the herd was a 350k and the wolves had halted the increase and they then got rabies 3-4 year cycle and 60-75 % were gone and in two years the herd exploded and reached 700k and over ate the range and pregnancy declined 90 to 60 percent and down went the herd The rabies cycle very strong and what Elton call the sled dog disease we say is rabies and goes back since European contact records*”.
- ⁵² A relevant note I received Jan 17th 2007 from Dr. Raymond Coppinger, Professor of Biology at Hampshire College and a widely acclaimed authority on the dog family, wild and domesticated. His latest book with Lorna Coppinger 2001, *Dogs*, Scribner, Simon & Schuster, New York.
Val -- I just read your article on wolf killings -- reminded me of an experience of my own. I was once working on Baffin Island. (I was collecting algae and plants from 100 feet below sea level to the top of the Penny Ice Cap. Why was I doing that in 1970? - someone paid me!.) One night (about two hours long) it snowed and I decided to move my camp higher up-- As I did that I noticed that wolves were watching -- As I moved I noticed they followed -- eventually they made me very nervous -- and I started back to the town of Pangnurtun. It took me thirteen hours to get there and they followed most of the way. When I told my experience to Sam Ranson the government hunter he asked why I hadn't put a shot into them and I said

I didn't have a gun - and he said I was a damn fool for being in wolf country with out gun. I told him about all the talks with wolf people like Dave Mech and that "killed by a wolf" had never been reported. And He said something like "And you believed it," as he walked off. I have a great book by three Alaskan girls who took over their fathers trap line when he sickened and died (a book that Ernie Pyle encouraged them to write) which has some wolf chasing dog sled stories. I only mention it because the "never reported" statement that was so prevalent in the 1970s is based on what kind of selective view of what literature? The other side of the story with out dragging it out - I know of a wolf kill, a coyote kills baby story and a dingo kills baby story which all turned out to be cover ups for murder. All those years that you did the sheep studies in the 60s -- did you always carry a gun??

⁵³ See Mark E. McNay 2002 *ibid*

⁵⁴ James Gary Shelton 1998 *Bear Attacks*. Pogany Productions, Hagensborg, BC. Shelton followed through and interviewed persons involved in four fatal and near fatal attacks by bears. In three cases there was no firearm or such came too late on the scene. In one case only two hunters armed with firearms were killed by a grizzly bear. In all cases in which wolves injured a person that person was not armed with a firearm; axes in the hand of a strong man have proved here and in Russia to be poor weapons. Attacks by wolves on people armed wit firearms are, naturally, hard to come by as they remain unreported. A rancher friend from Saskatchewan called me in November 2005 to tell me of a neighbor who, out hunting deer, was suddenly attacked by three wolves. He shot two and the third fled.

⁵⁵ The validity of this conclusion was reinforced by my neighbor bravely confronting a pack of five wolves at about 3-5 m distance on March 26th 2007, in which two wolves advanced on him aggressively, snarling and baring their teeth while the other three kept on attacking his old dog. The oldest reference I have to this is Hans Friedrich von Flemming in 1749 who states that even an old man-eating wolf shyies back from a strong man, one reason why children are the primary targets of wolves hunting humans. Hans Friedrich von Flemming in 1749. *Der Vollkommene Teutsche Jäger*, Leipzig. P. 108. Every ethologist working with habituated or tame animals is keenly aware of this principle.

⁵⁶ Prof. Harry Frank wrote to me: "*Wolves are very sensitive to vertical size. One can almost see the ongoing calculations in a socialized wolf's eyes when introduced to an unfamiliar human*".

⁵⁷ A colleague of mine did strangle successfully a fully-grown wolf. However said colleague was a very tall, athletic man.

⁵⁸ Banfield, A. W. F. 1964. Review of F. Mowat's *Never Cry Wolf*. *Canadian Field naturalist*. 78:52-54; Pimlott, D. H. 1966. Review of F. Mowat's *Never Cry Wolf*. *J. Wildlife Management*. 30:236-237.

⁵⁹ David Mech 1970 *ibid*. p. 340.

⁶⁰ John Goddard 1996 A real whopper (cover story). *Saturday Night*, May issue Vol 111 Issue No. 4, p46, 8p, 3bw.

⁶¹ Karen R. Jones 2002 *Wolf Mountains*. Univ. Calgary Press, Calgary. See: pp. 136-140.

⁶² Banfield, A. W. F. 1964, Pimlott, D. H. 1966. *ibid*.

⁶³ See discussion of firearms ownership and policy in Will Graves 2007 book *Russian Wolves. Anxiety through the Ages*. Detselig, Calgary.. Appendix H.

⁶⁴ Lois Chrisler 1956, *Arctic Wild*. Ballantine books, New York.

⁶⁵ See Raymond Coppinger and Lorna Coppinger 2001. *Dogs*. Scribner New York. pp. 46-47. In addition I have had many personal discussions and e-mail exchanges with Erich Klinghammer, Ray Coppinger and Harry Frank.

⁶⁶ Janice Koler-Matznick 2002 *ibid*.

⁶⁷ From correspondence with Prof. Harry Frank.

⁶⁸ See Raymond Coppinger and Lorna Coppinger 2001. *Dogs*. Scribner New York. pp. 23 Speaking of wolves “*They are an effective, widespread, and basic predator. They are not very good adapting to change. Wolves are often referred to as an indicator species, which means that any little deterioration of their habitat causes immediate drop in their numbers in that habitat. They don’t seem to be able to adjust to expanding civilization the way coyotes do. The coyote’s range is increasing in the face of human expansion, while the wolf’s is decreasing.*” Similar sentiments were expressed to me repeatedly by Dr. Ed Banks.

⁶⁹ Gray Wolves may have occasionally penetrated into north America prior to megafaunal extinction along glacier fronts. The continent itself was occupied by the larger and apparently less cold-adapted Dire wolf *Canis diurus*. Gray wolves are by adaptation snow-dogs.

⁷⁰ This hard-edged regime of interlocking instincts and hard learning are introduced to the reader in the Introduction to Harry Frank’s 1987 (editor) book *Man and Wolf*, Dr. W. Junk Publishers, Dordrecht. Adult wolves are difficult and dangerous companions that need great knowledge, but also compassion and considerable diplomacy to be handled safely.

⁷¹ Prof. Harry Frank wrote to me in an e-mail. *Dave Mech and others involved in the Yellowstone release project had to pen the to-be-released wolves several weeks just to get them adapted to the flavor of local deer, which subsisted on a different diet from the diet consumed by the deer in the wolves’ home range. If I remember correctly, the wolves rejected local carcasses for at least a couple of weeks.*

⁷² Janice Koler-Matznick 2002 *ibid*.

⁷³ *Ibid* Raymond Coppinger and Lorna Coppinger 2001. Here the seminal work with dogs by Professor Raymond Coppinger and his wife Lorna is most relevant.

⁷⁴ *Ibid*. p. 24.

⁷⁵ Historical records examined by historians show, for instance, that wolves preferentially kill children. This is a universal exemplified not only in the Russian literature (please see the Appendix A), but also the European, North American, Indian and Korean literature. Thus Magnus Hagelstam (magnus.hagelstam@kolumbus.fi +358-41-545 3803, +358-9-262 8166) stated of Finish studies the following: “On October 19th, 2005 the historian Dr. Antti Lappalainen (opetusneuvos.lappalainen@kolumbus.fi, +35895416946) published his research findings on lethal wolf attacks on humans in Finland under the title “*Suden jäljet*”, *The Tracks of the Wolf*, ISBN 952-5118-79-7. By going through old church records and newspapers, Dr. Lappalainen found a total of 193 lethal attacks from 1650 onwards, of which 110 children who fell victim to predatory attacks and 83 adults, all of whom probably fell victim to attacks by rabid wolves. Of the cases Mr. Lappalainen found, 139 occurred between 1802 and 1881 - 78 children and 61 adults. During the seven year period from 1844–1850 twenty five children and two adults were killed and during the four year period from 1877–1881 twenty nine children and three adults. From the beginning of the 19th century, the tragedies were reported and described in newspapers. The church records only state the name, the age, the parents’ names, the home village and the cause of death of the victims. Hagelstam translated contemporary reports on the latest man-eating wolves in Finland in a letter to the EU Commission in June, 2005: In the Tampere region the wolf killed four children in 1877. The first one was a two-year old boy who played in the front yard in the month of May. A grown-

up observed it and ran after the wolf which let go of the child. The child later died of its wounds. In June the wolf took one of two boys aged 6 and 8 who played in the front yard. Only the trousers and the belt were found. In July a wolf appeared at the beach where three children were swimming in lake Ylöjärvi. The oldest child took the youngest with him and ran home for help. The wolf took the remaining nine year old boy. The father came running to help and the wolf then let go of its prey in a field of oats. The boy was still alive but died in the arms of his father. A 12-year old boy was taken by the wolf when herding cows. People heard him shout but thought he was shouting at the cows. As he didn't return home people went looking for him and found only one leg with the boot on. The most famous man-eating wolves lived in the region of Turku 1880 - 81, where they killed 22 children. They were an old female and a young male, probably her offspring." Mr. Hagelstam went on to list the names, dates and circumstances of death from wolves for each one of the children. The Korean experience is summarized by Robert Neff in *Devils in the Darkness*, 2007/05/23, copyright 2007 *Ohmy News*.
http://english.ohmynews.com/articleview/article_view.asp?menu=c10400&no=362934&rel_no=1&isPrint=print. The Indian papers dealing with child predation by wolves are cited here in other endnotes.

⁷⁶ See Daniel C. Dennett 1995. *Darwin's Dangerous Idea*. Simon & Schuster, New York.

⁷⁷ See Valerius Geist, and Ian McTaggart Cowan 1995. *Wildlife Conservation Policy*. Detselig, Calgary. For the latest see Geist, V. 2006. The North American model of Wildlife Conservation. A means of creating wealth and protecting public health while generating biodiversity. Pp. 285-293 in David M. Lavigne (ed) *Gaining Ground: in pursuit of ecological sustainability*. Published by the international fund for Animal Welfare, Guelph, Canada and the University of Limerick, Ireland. ISBN 0-9698171-7-7.

⁷⁸ A captive pack of nine wolf hybrids, kept as pets, killed its owner, Sandra L. Piovesan, of Salem Township, Pennsylvania, on July 17th 2006

⁷⁹ The second encyclopedic work on wildlife conservation, hunting and forestry, which I have currently no access to, was by H. Döbel 1754. *Neueröffnete Jäger Practica: Oder der Wohlgeubte und Erfahrene Jäger*, Leipzig. 2nd ed.

⁸⁰ Valerius Geist 1998 *Deer of the World*, Stackpole Books, Mechanicsburg, Pa

⁸¹ D. Müller-Using, M. Wolf and E. Klinghammer 1975 p. 203 in *Grzimek's Animal Encyclopedia*, Vol. 12 Mammals III, Van Nostrand Reinhold Co. New York.

⁸² Will Graves 2007 *ibid*.

⁸³ Reported in a German Animal Encyclopedia from the turn o the 19th to the 20th century, Brehms Tierleben, p. 137 in my condensed ed. 1952, Safari Verlag, Berlin.

⁸⁴ In much of the pro-wolf literature there are attempts at minimizing the evidence of predation by healthy wolves, blaming wolf attacks on rabies. See Grzimels encyclopedia. *Ibid* p. 203, Pavlov Appendix A.

⁸⁵ Alby Stone 1994. Hellhounds, Werewolves and the Germanic Underworld. *Mercian Mysteries* No.20

⁸⁶ Loki - Wikipedia, the free encyclopedia, <http://en.wikipedia.org/wiki/Loki>

⁸⁷ Will Graves 2007 *Russian Wolves. Anxiety through the Ages*. Detselig, Calgary, Alberta, Canada. Edited by V. Geist.

⁸⁸ Appendix G.

⁸⁹ Indian scientists also found that children were the primary victims of wolf attacks, apparently by individual wolves who began to specialize on humans as prey due to the scarcity of natural prey (Jahala and Sharma 1997 Child-lifting by wolves in Eastern Uttar Pradesh, India. *J. Wildlife Research* 292:94-101).

The common factors are high human population, poverty, too few or heavily guarded livestock, and poor availability of wild prey (Jahal 2003 Status, Ecology and conservation of the Indian wolf *Canis lupus pallipes* Sykes) *J. Bombay Natural History Society* 100 (2&3) Aug.- Dec. pp. 293-307). See also Rajpurohit, K. S. 1999. Child Lifting: wolves in Hazaribagh, India. *AMBIO* 28(2), 162-166.

⁹⁰ Incidents similar to those in Russia are reported also in other countries such as these three cases from Afghanistan and Turkey. (1) On the Internet newkerala.com Kabul 18 Feb 2005, It was reported that hungry wolves were driven by freezing cold in the mountains to invade Afghanistan's villages and have killed and devoured four people in the last two weeks. This was reported by the official Bakhter News Agency (BNA). Heavy snowfall is driving wolves from the mountains toward villages and in addition to four people being killed by wolves 22 have been bitten in Paktia Province which borders Pakistan. Over 460 head of cattle have also perished in the freezing cold. The Khaleej Times Online on 19 March reported the names of three of the ones killed. Several guard dogs and other domestic animals have been killed by vicious wolves across the southeast of the country. (2) Also on the internet on timberwolfinformation.org/info/archieve/newspapers on 2/27/05 from Ankara Turkey it was reported that a ten year old boy named Onur Bahar was killed by a wolf in a field near his house on the outskirts of Talas. The wolf went for the boy's throat and torn his left arm off. The Provisional Governor Ekrem Calik told the Anatolia New Agency that the prints showed the boy had been attacked by a wolf. The wolf might have been drawn to the area by the smell of bones dumped outside a nearby supermarket. For incidents in other European countries see Capstick, 1981. *Maneaters*, Safari Press, Ca. pp. 108-114. (3) Roy Stewart (2004) In his book about travels in Afghanistan "The Places in Between" (p. 123, Harcourt Books) reports of arms being carried in order to ward off wolves, as well as of incidents in which Afghans were killed and eaten by wolves. He makes it clear that wolves were considered a lethal danger.

⁹¹ See Appendix C.

⁹² Special report by Mike Cade, Land in Crisis, *Range Magazine* , Summer 2007 pp. 46-54.
<http://www.rangemagazine.com/specialreports/07-su-land-in-crisis.pdf>

⁹³ There have been people bitten by rabid wolves and killed, but such kills "do not count" as it is the rabies virus, not the wolf-bite that killed. There have been other attacks in Canada, historical and recent. Two wolves from a pack of seven attacked Scott Lavigne in a campground on Vargas Island, off Tofino on Vancouver Island, British Columbia, Canada, on July 2nd 2000, leading to severe injuries. The pack had become habituated and then, apparently, food-conditioned to the camp ground (Beatty, J. 2000. Vargas Island wolves too used to human contact, observer says. *The Vancouver Sun*, July 5th, pp. A1-2) Mr. Fred Desjarlais was attacked and wounded by a wolf on December 31st, 2004 near Camenco's Key Lake mine in northern Saskatchewan. There are also unreported recent attacks by wolves in Saskatchewan, one of which I was informed on in some detail. A local rancher was attacked by three wolves while deer hunting in November of 2005. He killed two wolves. I am also aware of unreported confrontations between wolves and people on Vancouver Island. There was a wolf attack in Alaska on Becky Wanamaker on 7 July 2006. Becky was walking along the Dalton Highway northwest of Fairbanks, when she was attacked and wounded in her legs as she ran away. September 6th 2006 a lone wolf attacked and wounded six people, four of which were children, in a provincial park near Sault Ste. Marie, Ontario. According to Alaska wildlife biologist Mark McNay, who spent two years researching wolf attacks in North America, there have been 13 attacks in 30 years before 2000 (Mark E. McNay 2002 *A case history of wolf-human encounters in Alaska and Canada*. Alaska Dept. of Fish and Game, Wildlife Technical Bulletin 13). In virtually all cases there is some evidence that the wolves were short of natural prey and or had become habituated feeding on garbage or preying on livestock. However, from personal experience I can vouch that wolf-human interactions are greatly under reported.

⁹⁴ Tame, inquisitive wolves are a sign of danger, especially if there is more than one wolf. However, single inquisitive wolves are the norm as such individuals are likely to be without a pack, and are less well fed than members of a pack. This is also part of the conventional wisdom about wolves by Alaska natives See Richard k. Nelson 1973. *Hunters of the Northern Forest*. Univ. Chicago Press, Chicago, Il.

⁹⁵ Dr. Susan Crockford of the University of Victoria, provided in an e-mail of May 2nd 2007 the following anecdote: "I recall (did I tell you?) the story about the year my mother lived at Hesquiat Harbor on the west coast, as their teacher: one winter weekend, while almost everyone was away at a potlatch (and she was in Victoria visiting me and her newborn grandson), band council members rounded up all the village dogs they could find and shot them. They offered the following rationale, which apparently no one in the community could really argue with, as it was well-known "oral knowledge": too many dogs in a community bring wolves in dangerously close and the only way to mitigate the very real danger of wolf so close to the village is to severely reduce the dog population.....But what it also says is that aboriginal people on Vancouver Island have long been aware of the danger posed by wolves being in close proximity to villages and had strategies in place to deal with them. Unfortunately, short of finding someone else present in the village at that time to corroborate, this is just another anecdote"

⁹⁶ Jerome H. Woolpy and Benson E. Ginsburg. 1967. "Wolf Socialization. A study of Temperament in a Wild Species". *American Zoologist* 7:357-363. See Appendix B.

⁹⁷ Colleagues who have raised and studied captive wolves such as the psychologists Harry and Martha Frank or the ethologist Erich Klinghammer, are keenly aware that tame wolves, once they are fully grown, will test their human masters for dominance. The attack can be sudden and severe. It can be predicted that such an attack will occur, but it cannot be timed accurately though experienced keepers of adult wolves do develop an understanding when attacks are likely. Once the wolf is subdued it apparently ceases to attack. Such dominance attacks happen within wolf packs, captive and free-living, and can lead to the killing of a previously dominant wolf. Captive wolves are on the lookout for weaknesses in their human masters and may attack such if they are unwell. Dr. Erich Klinghammer who has kept and studied wolf packs for decades insist that wolves do not "play", but continually test. Also, he will not go into the enclosure with tame wolves if he has a cold. A captive pack of nine wolf hybrids, kept as pets, killed its owner, Sandra L. Piovesan, of Salem Township, Pennsylvania, on July 17th 2006. Packs of captive and free-living wolves are known to rebel against and kill their dominant members, and this tragedy appears to be a case in point. It is similar to a case in Canada where a 24 year old Wildlife Biologist, Trisha Wyman, was killed on April 18th 1996 by a captive wolf pack in Ontario.

⁹⁸ Robert Neff in *Devils in the Darkness*, 2007/05/23, copyright 2007 Ohmy News.
http://english.ohmynews.com/articleview/article_view.asp?menu=c10400&no=362934&rel_no=1&isPrint=print.

⁹⁹ See Mark McNay 2002. *ibid*.

¹⁰⁰ In correspondence with Dr. Leonid Baskin, Institute of Ecology and Evolution, Moscow, it turned out that in Siberia, even where wolves were common, attacks on people were absent. The critical criterion appeared to be the ready availability of livestock. That is as long as domestic reindeer were available or adequate herds of sheep, goats etc, wolves concentrated on these and left people alone. This suggests that wolves, which learned to kill ungulates, find it difficult to change over to humans, as we are extremely different from the prey they learned to kill. Dissimilarity or discrepancy between what the wolves learned as pups and youngsters and the appearance, sounds and smells of humans, apparently acted to protect the latter. Baskin also reported that reindeer herders discovered that wolves may learn to avoid the dangers from hunting and yet continue to kill domestic reindeer.

¹⁰¹ Wolves readily spot indications of vulnerability. Prof. Harry Frank wrote in an e-mail to me: "Wolves are extraordinarily sensitive to movement cues. Something as trivial as a head cold can affect one's gait. Even if the head cold-sufferer is unaware of it, a wolf is very likely to detect it. I believe that at Wolf Park, workers with any sort of illness or injury are not permitted to enter the wolf pen"s.

¹⁰² Jerome H. Woolpy and Benson E. Ginsburg 1967. *ibid*.

¹⁰³ It is important here to recognize that wolves learn in a manner different from dogs, and that they excel at learning by closely observing what is going on. They are insight learners, and they solve problems, such as unlatching gates, for instance, almost at once! Some dogs may solve this, but over a very long time, and usually not at all. Captive wolves or coyotes not only learn to open their cage, but quickly open all the others as well! And they achieve this by sitting and just watching attentively – an activity wild wolves indulge in continually. That is from an elevated position they rest or sit and watch, watch, watch.... Many times wolves followed me and on some occasions sat beside my cabin at night, orientated towards the cabin, apparently watching what is going on. Wolves have large heads relative to the body and at comparable skull sizes have about ten percent more brain mass than dogs. See Ray and Lorna Coppinger 2001 *Dogs*, pp. 42-47, 54-55.

¹⁰⁴ Personal communication by Dr. Paul Paquet from research on coastal wolves in British Columbia. Wolf scat contained fur and claws of both black bears and grizzly bears.

¹⁰⁵ I am grateful to Prof. Harry Frank drawing my attention to multiple motivations of wolves attacking people.

¹⁰⁶ Urban coyotes in California have followed much the same – predictable – pattern. See Baker, R. O. and R. M. Timm 1998. Management of conflict between urban coyotes and humans in southern California. Pp. 229-312 in R. O. Baker and A. c. Crabb eds. *Proc. 18th Vertebrate Pest Conference*, University of California, Davis.

¹⁰⁷ See above: Alaska wolf called Romeo. *Ibid*.

¹⁰⁸ In correspondence with Dr. Leonid Baskin.

¹⁰⁹ Charles Kay, Cliff A. White, Ian R. Pengelly and Brian Patton. 2000. Historical wildlife observations in the Canadian Rockies: Implications for ecological integrity. *Cand.Field-Nat.* 114:561-583.

¹¹⁰ Frank Gilbert Roe, 1951. *North American Buffalo*. University of Toronto press, Toronto.

¹¹¹ Raymond and Lorna Coppinger 2001, *ibid*.