Wolves on Vancouver Island by V. Geist,

The last of the wolf pack that occupied us since their arrival here in summer 1999 is now dead and so its time to finish off the story. It's a narrative account, not a scientific paper. It all fell upon us, very suddenly and without warning. Had I known what I know now, I would have taken census data and organized systematic data collecting. It did not happen because I had no idea what was to unfold. So, read it and if you want to publish it feel free to do so.

Nothing prepared me for the experiences with Vancouver Island wolves, not the writing of colleagues, nor my own observations during years of field work, especially two winters in northern British Columbia. Wolves came through my Stone's sheep study are then every two weeks. Since timberline was low, I was afforded splendid opportunities for observation. In retrospect it appears that had I taken the European literature more seriously that I might have been better prepared. However, I had assumed that literature to be irrelevant to an understanding of North American wolves.

When I was a graduate student in the early 1960's, Vancouver Island wolves were so scarce that their very existence was doubted. Then in the 1970's wolves became common and swept the island north to south. The hunter harvest of black-tailed deer dropped from about 25,000 deer annually to the current level of about 3,000. Nevertheless, during the many summer vacations on the island from 1958-1995, we heard virtually nothing of wolves. There were reports of occasional sightings of single wolves, but little else and there was no obvious publicity.

When after retirement in 1995 we moved to Vancouver Island I was keen to find out if wolves were in our vicinity. We bough an acreage at the edge of the farming district north of Port Alberni, only a few miles south of the boundaries of Strathcona Provincial Park. Two salmon creeks traverse our land. It adjoins a dairy farm and it in turn a farm where initially pigs, but later sheep and cattle were being raised. Large meadows, well fertilized, repeatedly cut for ensilage and hay and grazed by livestock, extend in the valley flanked by dense second-growth, often swampy forests of red cedar, red alder, broad-leaf maple, cotton wood, Sitka spruce, hemlock, Douglas firs etc. Whenever there was a snow blanket, usually a most temporary one, we searched the area for tracks. In this extensive meadow system and the adjacent forests I found in December 1995 possibly one wolf track, and none in 1996, 1997 and 1998. In January 1999 my son Karl and I found a pair of what appear to be wolf tracks in a pocket of dense black-tailed deer activity about three miles from our house. We then suspected that a pack might be forming. It did. A wolf pack arrived in late summer 1999. The ultimate origin of the wolves is very likely Strathcona Provincial Park, a large class A provincial park in which there is no hunting, where wolves currently co-exist with elk.

Since our and our neighbor's land bordered on crown land and extensive private forest lands, our lands formed an edge with fairly wild, but young second-growth forests. These

flanked the Beaufort Range which rises sharply about one km from our house to a height of 5000 feet (Mount Joan). From 1995 to 1999 the forest edges of this large meadow system disgorged small groups of deer every night. Census counts and track counts in snow indicted about 120 deer in the meadow systems, with some 40-50 in a series of meadows close by. This suggested a density of about 30-40 deer per square mile. These were rather small-bodied black-tailed deer who struggled with liver flukes and with unknown infections as revealed on autopsy by greatly enlarged spleens. The deer emerged in much the same locations which I will term the "hotspots" and they came as well-spaced groups of does and fawns; bucks were rarely seen. The eastern edge of this area bordered on second growth Douglas fir forests, and the western part on barns and residences on acreages. These were almost free of deer as deer apparently respected the many dogs kept on farms and by households. Black bears were sighted very often and consistently. A number of huge males had taken up residence in the valley, keeping females out except at mating time. In late spring bears could be counted on to appear daily. Cougars were present, but invisible. In winter some 50-80 trumpeter swans could be found daily in these meadows, as well as large flocks of widgeons numbering several hundreds, about 50-70 mallards, a dozen green-winged teal and a sporadic smattering of other ducks, including wood ducks and diving ducks that rested on several small ponds. Feral eastern cottontails were making their presence known. Raccoons were uncommon, as were mink and otter. Ruffed grouse and pheasants were initially not rare. Among song birds, starlings, brewers and red winged black birds, formed large flocks as did band-tailed pigeons which favored chicken feed in our chicken coops. There were seasonally large swarms of crows, and a good many ravens year round. Turkey vultures were summer residents. Bald eagles were initially very common. Red-tailed hawk, Goshawk, Cooper's and sharp-shinned hawk, pigeon- and marsh hawks were occasional visitors. Great blue herons and night herons were common. We counted some 70 bird species from our kitchen window. In spring time the countryside rings with the chorus of tree frogs and western spotted frogs. Much of the animal life centered about the agricultural activities, especially about disturbed soils that generate fertility spots heavily exploited by wildlife. The closely managed cattle farm is particularly attractive to wild life. The creeks carried runs of Coho salmon as well as steel heads and ocean-run cutthroat trout. The salmon were avidly preyed on by bears in late fall. These were not shy about harvesting our fruit trees with rather severe pruning.

The wolf pack made its presence known by July 1999 and deer sightings dropped precipitously, reaching virtually zero in the large meadows by October. Only an occasional fresh track still betrayed a deer, even in the rutting season when deer are exceptionally active. Night observations revealed deer hugging barns and staying in meadows close to the very buildings they had previously avoided. Dogs were attacked by wolves and several were killed or severely wounded even though some owner's rushed in to save their dogs. Two dairy cow were found dead long after the fact, and a third one had to be put down having been severely injured about udder, sexual organs and . A wolf injured a newborn calf and its dam within 200 paces of the cow barns. The calf was rescued by the hired man on the farm, who rushed it to the barn on a quad. The wolf followed right to the barn. The injured heifer (a clearly visible cut on the inside of the tarsus of the right hind leg) subsequently limped, and when resting isolated herself from

the herd and lay down at the forest edge or within shrubbery. Of the three cattle kills that could be attributed to wolves, two were of cattle which apparently made their last stand in a deep pocket of a drainage ditch in water. The third one was run into the corner of a pasture against barb wire, beside a gate, where she was cornered and mutilated. A few cattle returned with docked tails and slit ears. There were many sheep kills. One neighbor saw a wolf appear in his yard and make off with a turkey.

While there was great tolerance for bears and cougars in the neighborhood, and initially some denial that wolves were the cause of the dead and mutilated cattle, this attitude changed in part because the wolves soon acted brazen. They did not flee from people, but stood or sat and looked them over, ran past them at short distances or approached to investigate. They approached and followed people mounted on horseback and were photographed doing so. This accelerated to the point in three instances of single wolves approaching and barking and howling at people from as close as 15 paces away. One of those people was my wife (two instances) and the other my next-door neighbor. I was the subject of a deliberate intercept once by the largest of the wolves. He saw me, ducked into timber then circled to intercept, howling twice at me, before stepping out on the road about 50 paces off, clearly interested. Our eyes met and he fled across the road.

When attacking dogs the wolves acted as if oblivious of the owners who could hardly dissuade the wolves by shouting and hand waving, and in extreme cases driving between wolf and dogs with a motorcycle or tractor or firing a shotgun – repeatedly - at wolves. This matched reports I received - privately - from a fellow wildlife biologist, and it matched with a previous publication about wolves on Vancouver Island. Also, the wolves became oblivious to gunfire. That summer, two wolves apparently habituated on a camp ground on Vargas Island off Tofino, attacked a camper and injured him seriously before the wolves were driven off by other campers. The two wolves were shot and proved to be healthy on inspection and filled with deer fawns. A road to our back meadow, previously a favorite route for leisurely walks with children was no longer used by people, except such mounted on or in some vehicle. When walking our dogs, I went armed.

Initially dogs and cattle responded noticeably to the presence of wolves. The cattle bunched, ran and even broke through fences and hastened from the meadows to the barns. Yet these very cattle would follow closely or even chase black bears. When we heard the first wolf howling our very large Bouvier des Flandre female, whined and tried to get into the basement for shelter. On our walks, the dogs stuck to us closely during portions of the walk. This was not usual behavior.

A decade earlier a wolf showed up and precipitated similar actions by cattle, a few of which also lost the end of their tail. This wolf was shot as it fled, and matters returned to normal. Another long time resident described earlier visits by wolves, as well as his shooting a wolf out of a pack of seven, and killing another large male at short distance while grouse hunting as it stood and stared at him. Wolves were thus episodic visitors to this meadow complex. Standing up to people was a recurring theme.

In 1999 three wolves were trapped by the predator control officer on the farm with sheep. One wolf was killed by a duck hunter whose dog was attacked in his presence by three wolves. He wounded a second wolf and it may have been the same wolf whose skeleton was found subsequently. I shot one of two wolves that appeared together, a female wolf.

In 2000 three wolves were taken by the control officer. My neighbor shot two wolves and I shot one.

In 2001 there were present two adult wolves. Trapping failed, though two traps were sprung and had been dragged off. My neighbor shot a large male wolf which was sent to the US Fish & Wildlife Service forensic laboratory in Ashland, Oregon. I shot a wolf, who dropped at the shot, but ran of subsequently, not to be found despite extensive searching by two neighbors and myself with a dog. This wolf reappeared in late summer 2002, limping, with a healed but poorly functioning right front-leg. I saw him three times and my neighbor saw him twice. We had an informal agreement not to shoot him as this wolf had been seen fraternizing with sheep dogs, a rarely observed occurrence. This wolf made an appearance early in the morning on February 28th in front of our house, where he barked at my wife. He might have been attracted by one of our female dogs which was then in heat. This wolf was shot by a sheep farmer on March 12th 2003 and was turned over to BC Fish and Wildlife for further analysis. That was apparently the last wolf about. However, we had tracked in winter 2001/2002 a pack of four wolves who paid here a short visit.

Although bears and cougars were largely innocuous, bear and cougar problems erupted in 1999 when four bears were killed and in 2000 when an additional four bears were dispatched – none by a hunter. It is surmised that poor berry crops precipitated break ins by bears into sheep sheds, poultry barns, hog pens as well as brazen appearances in orchards – all very close to houses. One bear was run over by a truck and seven were trapped or shot. All of these bears were exceptionally large males. One huge, but very shy male survived, as did several smaller males. One large male confronted my wife and myself and while he survived that encounter he disappeared and was apparently shot while breaking into livestock pens. In 1999 two apparently starving cougar yearlings settled down to killing a cat-lover's pets and were dispatched by the predator control officer. A third cougar yearling was killed by hunters after it settled in among houses and even killed a deer in a barn. Thus in four years there were killed within a 2 km circle around our house 13 wolves, eight bears and three cougars.

The effect of wolves on wildlife was not only direct, but also indirect. The sheep operation acquired five herding dogs, three of breeds that were bred to keep wolves away. These dogs chased not only deer from the meadows used by sheep, but also from adjacent meadows. They made life intolerable for deer over about three quarters of the observation area. Their roaming could be observed directly as well as tracked in the snow. These dogs all but eliminated deer and bear activity within their radius of operation. When wolves were about the dogs moved up to a kilometer from the sheep to confront wolves in prolonged barking matches. Eventually, they were seen – repeatedly - to fraternize with wolves. The last wolf shot was sitting among the sheep dogs.

Since we had three and a half years of observations when there were no wolves about, we were able to compare the before and after when wolves were present, as well as the following effects of the absence of a wolf pack or only the sporadic appearance of a single wolf. The deer deserted the areas hunted by wolves and moved into the close presence of people and houses – despite dogs. That is, while deer formerly avoided the areas closely patrolled by farm dogs, they now accepted the presence of dogs and now lived closely about human habitation. The deer were largely night active when most dogs are safely in houses. While we experienced no deer damage to our orchard, ornamentals and garden, when the wolves were absent (1995-1999) such damage rose sharply and severely in the presence of wolves. In the following years the antler size of bucks increased noticeably as did their body condition. The deer became tame and brazen, particularly in establishments with no dogs or no effective guard dogs. A fraternal group of bucks formed in 2000 which lived among buildings and was very active, but strictly at night. Only exceptionally were these bucks seen at dusk and dawn. In the fall of 2001, after the last wolf had been shot (injured), deer began to appear in the ecological "hotspots" again. The survival of fawns through the winter of 2001/2002 was very high, as was the survival of fawns the following year. The differences were dramatic! Still, now that deer recovery is in progress the number of deer which was about 120 before the wolves arrived is currently about 20. This, however, does not count the deer which now live permanently among houses and barns. These amount in my observation area to another 20 deer.

With the arrival of wolves in the large meadows, the trumpeter swans abandoned these in 1999/2000, and did not return for two years till the winter of 2001/2002 when there was no resident wolf pack present. The same meadows were also abandoned by ducks and Canada geese. When the first deer started to re-appear about the meadows following the absence of wolves, so did a few ducks and geese. The return of the Trumpeter swans was dramatic as the same number of swans were seen last winter as in the last winter before the wolves came, about 70-80 swans. However, ducks and geese used small meadows close to the barns even when wolves were present. When the injured lone wolf returned, the trumpeter swans again left the meadows and the deer became very alert.

It appeared that the longer the wolves stayed, the more they were shot at and missed, the bolder they became. The sheep appeared to be a primary attraction. The sheep dogs and wolves developed a dear enemy syndrome, and we learned to differentiate the nightly barking of the dogs when they were up against wolves as opposed to harassing a bear or deer. After sunset the dogs rushed out to the eastern edge of the meadows where these met the tall forest along the mountain slope. Here developed vigorous extended barking and an occasional howling. At dusk on October 19, 2001, when only a lone wolf remained, I observed him fraternizing with the sheep dogs. Fraternization had been observed a number of times by the owners of the sheep. In September 2002, when the same wolf returned, there was evidence of extreme interest in the wolf by the same dog that was most friendly towards the wolf in the fall previous. The sheep remained a source of attraction to the lone wolf. We found two stray sheep apparently killed and eventually eaten by a wolf in the winter of 2001/2002. We tracked this wolf repeatedly heading

towards the sheep farm, where he was seen repeatedly with the dogs by our neighbor and was eventually shot while sitting among the sheep dogs.

It is important to note that deer, outside suburbs, cities and farmsteads are very rare animals. Vancouver Island has been subjected to extensive clear-cut logging which has removed the type of old growth forests that deer depend on in winter. Where such patches were left, deer concentrated and apparently attracted mountain lions, wolves and black bears. The latter are thought to be efficient fawn predators. In late spring 2000, 2001 and 2002 I spent eight (8) evenings scouting for black bears in forested mountains west of Port Alberni. I saw a total of 45 bears, about 60 elk, but only one deer, a young doe. Even deer tracks were exceptional in the vast logged off areas. A combination of loss of winter range and greater susceptibility to predation is thought to have eliminated black-tailed deer in the hinterlands of the island. Fellow biologists recount how after the arrival of deer skeletons littered the forest. A small, but thriving elk population is thought to maintain wolves, which then eliminate pockets of deer wherever such develop. This would account for the episodic appearance of wolf packs.

These wolves were different in external appearance and acted differently from northern gray wolves. They were yellow with black markings, giving at a distance a mottled dark gray appearance not unlike some German shepherd dogs. They were small, weighing 60-72 lbs. They had the large webbed paws of wolves. Their appearance was not unlike that of other coastal wolves. A large male wolf analyzed morphometrically was in all respects a wolf. It had no characteristics of dogs, although it sported a number of idiosyncrasies in the skull. A genetic analysis is in progress. Of three other Vancouver Island wolves two had mtDNA typical of domestic dogs. These wolves howled little and never loud. They barked considerably like dogs. They were hard to dissuade in their attacks on dogs, killing and feeding on such right in front of houses, harassing dogs almost under a veranda despite loud protests by my neighbor, chasing dogs under a moving tractor, attacking dogs right in front of one or several persons, and being persistent enough even when my neighbor drove with a motor bike between his dogs and the attacking wolf. They were not shy, even brazen, were not readily discouraged by human presence, and even approached people to very close range howling and barking, or followed these, barking at them. These experiences match that of other persons on Vancouver Island.

What appears to have happened is that wolves build up, virtually eliminated their primary prey, black-tailed deer, and then through food shortages grew small in body and became emboldened to approach farms and houses for food. Our wolf observations thus resemble those reported from Eurasia. Had there been enough wild prey, it is unlikely that wolves would have targeted livestock and pets or brazenly approached and threatened humans. What we experienced is likely to repeat itself wherever wolves severely deplete their prey. And this is likely to happen where governments are afraid to take appropriate steps early and succumb to “nature knows best” notion, as it keeps them out of trouble with vociferous elements of the public. The best management approach would be to intervene early and maintain a viable predator/ prey system with a large ratio of prey to predators.