By the time Anthony Henday arrived at the foot of the Rockies in 1754, Native culture had already been dramatically influenced by European contact. The Plains peoples had horses by 1732. They had acquired mounts through trade, theft, and war from tribes further south who had in turn obtained them from Spanish conquistadores.

The Spanish Barbs – small tough horses that originated around North Africa’s Barbary Coast – were the ancestors of modern North American mustangs. Native peoples cultivated the natural toughness of these horses and bred them for speed. The horse allowed them to hunt over greater areas. It allowed Native peoples to be more mobile and expand their material culture. As European settlement pushed Native peoples ever westward, the horse helped them to advance into new terrain. The horse was also a weapon of war. With the horse, the Blackfoot were able to dominate the western plains.

The horse was not the only early benefit to Native peoples in what later became a rather one-sided cultural exchange. They acquired the gun from Europeans, which further revolutionized the way they hunted and waged war. With the gun and the horse, the Blackfoot were able to drive the Ktunaxa over the Divide and keep them there.
While the horse was the first great biological innovation to be introduced to North America from Europe, it was not the last. In his remarkable book *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*, Alfred Crosby dramatically reveals the extent to which Europeans making their new homes in Canada made the West resemble biologically the places they came from in Europe.

Crosby substantiates his point with a reference to the old American folk song “Sweet Betsy from Pike.” As Crosby explains, Betsy is from Pike Country, Missouri. She crosses the mountains “with her lover Ike, two yoke of oxen, a large yellow dog, a tall shanghai rooster, and one spotted hog.” Crosby then makes the point that Betsy and her menagerie were part of an invasion of North America that went far beyond the settlers. What occurred in the nineteenth century was nothing short of “a clucking, crowing, grunting, lowing, neighing, bleating, barking, buzzing, meowing, self-replicating and world-altering invasion of North America by Europeans and their livestock and weeds.” Much of southern Canada, as a consequence, has become a neo-Europe.1

In the wake of the horse came hundreds of introduced plant and animal species. Some such as cows, pigs, goats, sheep, dogs, cats and bees were introduced intentionally, but others were not. The European invasion of North America also occurred at the viral and bacterial levels. Here the ecological history of the West overlaps with historical epidemiology. The period from the fifteenth to seventeenth centuries was a perilous time for the human species. Growing concentrations of humans in crowded, dirty cities created circumstances ripe for epidemics. Bubonic plaque struck on a cyclical basis during this period and diseases like smallpox became so commonplace that Europeans developed immunity to them. That, however, does not mean that the rest of the world did.

Native peoples in North America had little or no resistance to the diseases Europeans brought to the New World. The resulting loss of life among Native peoples was so substantial it led many Europeans to believe that the mountain West was un-peopled and therefore suitable for resource exploitation and European settlement. This is evidenced by John Palliser’s account of the area that is now the southern part of the Canadian Rocky Mountain Parks World Heritage Site. Palliser reported finding only 225 Stoneys between the North Saskatchewan River and Canada’s present border with the United States. Why Native peoples were few in the Canadian West at this time is one of the saddest stories in our history and one we don’t like to tell.
By far the most devastating of the diseases introduced from Europe was smallpox. Caused by a pathogenic virus, it was normally spread by “droplet infection,” usually in a sneeze or by direct physical contact with a person in the infectious stage. It could also be contracted from corpses for up to three weeks after death and from items that had been in close contact with a diseased person, for a period of up to a year after death. Once a person contracted the disease there was little that could be done.

It is important to compare the mortality rates of various epidemic diseases and smallpox as they affected Native peoples. The average mortality in a typical bubonic plague or smallpox epidemic in Europe was about 30 to 40 percent. The ebola outbreak that terrified the world in 1989 infected 315 people. Of those infected with this horrible hemorrhagic fever, 244 died, a mere 77 percent mortality. I say “mere” to highlight the fact that smallpox mortality among the Native peoples of North America was much higher: in many tribes, the death rate reached 90 percent.

Why was the mortality so high among Native peoples? The first reason, obviously, was that they lacked any kind of immunity. Epidemiologists call the four major smallpox outbreaks that happened in the West “virgin soil” epidemics. These are disease outbreaks in populations that generally lack acquired or inherited immunity to new diseases and do not have the cultural experience to deal with them.

Another reason why the mortality was so high was the terrible nature of the disease itself. The following account was written by William Bradford who witnessed an outbreak of smallpox among Native peoples on the Connecticut River in 1634:

> For want of bedding and linen and other things they fall into a lamentable condition as they lie on their hard matts, the poxe breaking and mattering and running one into another, their skin cleaving (by reason thereof) to the matts they lie on. When they turn them, a whole side will flay off[f] at once as it were, and they will be all of a gore blood most fearful to behold.

Both Native people and Europeans made fatal mistakes in managing these epidemics. The latter failed to recognize the need to contain each epidemic. Given the inter-connected nature of Native family structures, it was impossible to prevent a wavelike spread of the disease outward from its epicentres. Despite the close-knit and caring nature of their culture, Native peoples did not have the means with which to deal with this class of disease. Two traditional approaches to healing the sick were particularly dangerous in highly contagious viral infections.
like smallpox. The ingathering of relatives around the sick, which was a common Native practice at the time, allowed droplet infection to advance even more quickly through a population. While sweat bath and cold-water treatments were often deemed valuable in treating typical maladies, they could induce deadly shock when employed in the treatment of febrile diseases like smallpox. The failure of traditional forms of medicine only exacerbated the misery.

We can infer a lot about what happened to Native populations in North America from other epidemics. First there would not be enough experienced people to take care of the sick. As more people fell sick and became helpless, there would be very few people left to care for the ill. It is likely that normal subsistence activity ceased. Inadequate nourishment and even starvation may have taken a toll on the ill. In most epidemics, those most vulnerable to disease are the very young and the very old. General societal breakdown often occurs. The survivors lose hope. Panic often ensues. Suicide and grief-induced madness are not uncommon. And the effect can be long-term. In depopulated and scattered communities, survivors often find it difficult to find mates of the right age and kin status. Populations can continue to drop even after the epidemic has passed.

Smallpox greatly altered the demographics of the continent, helping Europeans gain a population majority on the plains and in the Pacific Northwest. Some 900 archaeological sites in and around the Canadian Rocky Mountain Parks World Heritage Site attest to Native occupation. The West was not empty and we were wrong to assume we owned our neighbour’s homes simply because many of them had died.

We are still very much feeling the downstream historical influence of smallpox today. Not only did the fur trade pass on a diminished wildlife assemblage, it also passed on a western landscape devoid of a large number of its original inhabitants. It is stunning to realize that many Aboriginal populations in North America have yet to return to pre-epidemic population numbers. Some never will.

Once again we confront what appears to be a consistent theme in the history of the mountain West since the beginning of the Pleistocene: that of persistent diminishment of native ecosystems and painful loss of historical cultural diversity. It is this pattern that we have to reverse if we wish to create a culture commensurate with place in the Canadian mountain West.