

The Economics of Beaver

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Beaver are large rodents that can reach 4-6 feet in length and weigh 90 pounds or more. The beautiful and tragic flaw of the beaver is the magnificent fur in colors ranging from yellow brown to almost black. The fur is very dense with guard hairs over soft under fur. The hairs interlock to help protect the beaver from cold water by holding in air. The interlocking hairs made the beaver an ideal source of fiber for felting and particularly for felt hats. The beaver also produces a yellowish secretion “castoreum” in two sacks between the pelvis and the tail bone. This was used as a lure by trappers. It was also commercially collected and used as a scent enhancer in perfumes and as a food additive. It was considered an almost magical remedy in traditional medicine.

Beaver pelts came either as dry raw pelts (parchment, *sec*) or coat (fat, *gras¹*) furs that had been used in native garments. The coat furs had been used in clothing and the guard hairs were worn off. This made them more flexible and easier to process for felt. A “made beaver” was one “coat” beaver. In the early years coat beaver were more valuable than parchment. Parchment furs became more valuable once the technique of carotting² was developed.

Beaver fur quality was generally lower for furs from the South and towards the coast with better quality in the North and mountains. The fur was best in late fall to early spring, but trappers in the field often kept taking furs even when the quality was lower. Many grades of beaver were noted and the quality and size determined the price they would bring. Beaver pelts were generally shipped in packs of 90 pounds, typically with 45-60 skins. The prices in London for beaver were relatively stable for decades until a precipitous drop of 90% about 1840.

¹ The inner sides were scraped and rubbed with animal marrow and brains, then worn for a year or two

² Furs were brushed with a mercury and nitric acid solution to soften them and remove the guard hairs, part of the reason we say “mad as a hatter” from mercury poisoning.

Beaver fur was an item of trade in America even before the earliest English, French and Dutch settlers arrived.³ In 1540 a primitive fort on Castle Island (near Albany NY) was built by French traders but soon flooded out. Henry Hudson, exploring for the Dutch East India Company, reached the area in 1609 and claimed it for the Netherlands. In 1613 the Dutch Captain Adriaen Block led fur trade expeditions to the Mohawk and Mohican people. In 1614, Hendrick Christiaensen rebuilt the French fort as Fort Nassau, the first Dutch fur trading post. After it was flooded it was rebuilt as Fort Orange and included in the village of *Beverwijk*. The fur trade of New Netherlands moved through the port of New Amsterdam (New York) and depended largely on the trading depot on the upper Hudson River. Some of the fur originated in Canada and was smuggled south to avoid the government-imposed monopoly and fees.

When the American captain Robert Gray first interacted with the Chinooks on the Columbia River in 1792 he noted, “*Shifted the Ship’s birth to her Old Station abreast the Village Chinoak, command’d by a cheif name Polack. This River in my opinion, wou’d be a fine place for to sett up a Factory. The Indians are very numerous, and appear’d very civill (not even offering to steal). during our short stay we collected 150 Otter, 300 Beaver, and twice the Number of other land furs.*”

The reduction in European beaver populations from over-hunting and a fashion trend favoring felt hats about 1800 drove a new rush for beaver skins. Beaver also gained new attention in the West as the more valuable sea otters became scarce. The North American beaver (*Castor canadensis*) was once common and widely distributed with populations estimated as high as 400 million before European settlement, trapping, hunting and habitat loss. They were successful in habitats as hot as the Colorado and Gila Rivers in the deserts of Arizona and California down to the Gulf of California and to the far north of Alaska and Canada. Beaver could be found in most rivers, wetlands, and estuaries from what is now the Mexican border to the Yukon. Beaver are easy to find, stationary and thus easy to trap. They reproduce slowly and are very vulnerable to heavy hunting pressure.

³ In 1578 there were 350 European fishing vessels at Newfoundland and sailors were trading metal implements (particularly knives) for the well-worn, and valuable, beaver pelts.

The Russian private venture companies, and after 1799 the Russian American Company, relied on native trappers and hunters to bring beaver furs to their outposts. The beaver skins collected by the Russians might go out on a Boston ship, or they might go west to Okhotsk and from there to St. Petersburg or Kyakhta and on to China. The Russian's beaver trade faced considerable disadvantages as they did with sea otter furs. It cost more to get goods to the outposts, the quality of goods for trade was lower, and the travel needed to get furs to market was more challenging and costly. The Russian American Company collected more than 200,000 beaver pelts from Alaska and the Northwest Coast from 1798-1842.

The native people readily adapted to thinking of the value of trade goods in Made Beaver⁴ equivalents. Many already had extensive trading networks and their bargaining skills often frustrated traders. The trading companies were concerned with the bottom line, operating costs, profit margins and return on investments. However the companies operated, their success depended on how much they needed to pay out in trade goods to obtain furs or to pay trappers, how much it cost to transport them to market, and how much they would bring.

The Hudson's Bay Company, and its rival Northwest Company, were soon established on the coast and west of the mountains and after beaver. However, as Duncan McGillivray of the NWC wrote in 1808, "*The trade as it is carried on at present beyond the mountains, instead of getting any profit, is a very considerable loss to the Company, as the furs did not pay the transport to Montreal where they were shipped.*" The 3000 mile overland carry and paddle from the Columbia River to Eastern Canada was costly and slow.

Much of the HBC beaver hunting in the West was done by imported company trappers rather than indigenous hunters. Trappers included French voyageurs, Cree, Iroquois, Ojibway, Mohawk, Mohicans and others from the East. These men were already skilled in the use of steel traps for catching beaver. The resourceful *kanakas* from Hawaii also adapted quickly.

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All of the companies, ships, trading posts and gatherings offered opportunities for the free trappers. These men worked as private contractors and were paid only if they brought in furs. The companies would often advance them traps and supplies on loans or for a share of their catch.

The HBC fur brigades often included both *engages* (salaried men) and free trappers. They traveled in large groups for security. Typically the wives and children went along for the 6 month winter trapping parties. In 1830 John Work's brigade included 37 men, 4 hired servants, a slave, 2 youths, 29 women and 45 children (22 boys, 23 girls) for a total of 114 souls. The women were essential to treat the beaver skins. It takes at least 30 minutes for a skilled worker to process a skin and they were sometimes catching 70-80 a day.

John Jacob Astor's effort to create an American fur company in Oregon in 1810 failed despite good planning and a two pronged approach. The sea going party under the martinet Captain Thorn cost the company a ship, trade goods and the lives of many men. The overland party was not well led and suffered greatly, leaving a trail of starving wanderers. They did well simply to survive until they were rescued. Astor's trading post on the Columbia was sold to the British during the War of 1812, but his efforts helped stimulate investment and activity by the HBC and NWC.

Prospects for the region had seemed limited to the HBC until the North West Company's final shipment of Columbia furs to Canton made almost £12,000. This profit benefited the newly merged HBC-NWC company of 1821. In September 1822 a proposal for the extension of trade, economic diversification, and the opening of a direct trade to the West Coast was made to the HBC management and accepted. The economics were good once shipping could go west to the coast and to London or China by ship instead of east over the Rockies and then by a long canoe and boat trip to Montreal. Profits were good. The HBC operations on the Snake River in 1826 collected 2,188 beaver pelts worth more than £4,000 at a cost of just £1,500. A beaver skin costing the company just a few shillings in trade goods could be worth 30-40 shillings in London and about as much in China.

Foreign ships on the NW coast, primarily American, were also getting up to 10,000 beaver pelts a year. This is as many as the HBC was getting from the New Caledonia District⁵ and half as many as it was getting from the entire Columbia Department. In 1831 the *Owhyhee* under Captain John Dominis returned to Boston with from 8,000 to 9,000 beaver skins and many lesser furs. The American vessels were siphoning off furs that should, in the HBC's view, have been going to their inland posts but there was not much they could do about it. The Yankee competitors were also raising native expectations for the trade value for their furs. The higher prices the Boston ships could pay for skins forced the HBC to follow suit. One veteran complained that the price of beaver had risen fivefold on the coast during the 1820s because of increased competition.

Each HBC fur post was charged for trade goods and supplies, set at the London invoice price plus expenses. The costs were set by the governor and committee. Given these costs, each fur trade outpost developed its own standard of trade to relate all types of furs and trade goods to the "made-beaver" currency. The goods exchanged to obtain the fur were typically calculated at cost (including transit) as plus 50% so profits were made in several ways. Standards of Trade in effect for the HBC's far-flung trading region were often restrictive, slowed trade and reduced competitiveness with the Americans.

For a price listed at 10 shilling for a 3 point⁶ blanket, a trapper might bring in a prime beaver pelt worth 10 shillings at the post. It looks like an even trade, but the trader paid less than 6 shillings for the blanket including transit costs. So the trader return is closer to 33 shillings in London for just 6 spent. The beaver pelts were resold from London, New Orleans, or Boston to fur brokers and then onward to hat makers or tailors in London, Russia or France.

⁵ The HBC New Caledonia District was north of the Columbia District and included much of British Columbia

⁶ Points are related to blanket size, this varied over time, but at one time a 1 point blanket was 46 x32 inches

How much was a Made Beaver worth to the natives and trappers? Prices varied with location as a result of the distances and difficulty of supplying remote outposts. They also varied by the competitive situation of each outpost, with an allowance to give higher prices to take furs from competitors. The HBC 1830 Standard of Trade in New Caledonia illustrates the impact of distance. In this remote department the HBC paid only a few shillings for a beaver skin worth 33 shillings in London. It was profitable even after transport costs were subtracted.

Trade value in New Caledonia

<u>Item</u>	<u>Made Beaver</u>
trade gun ⁷	20
coat	6
a foot of tobacco	1
a gallon kettle	1
small axe	1
two gills ⁸ of powder	1
one pound of shot	1

When free trappers were able to trade to ships and other companies they were paid more. In 1836 a “made beaver” skin was worth 10 shillings in the Columbia Department. A free trapper might receive a credit of 40 shillings for 4 beaver pelts, buy a gun for 20 shillings, and still have credit left on the books. HBC made more money on “essential items” like gun flints. A trapper might end up paying 1 made beaver for 2 dozen flints that cost the company just 24 pence.

Beaver were over-harvested in the West by the British in a successful attempt to create a fur desert to slow American expansion and minimize land claims. Beaver hunts in California were often very successful. American, Russian and British ships had largely cleared beaver from the northern California coast before any records were kept but the HBC sent large fur brigades south to California most of the years from 1826-1843. In 1829, Alexander R. McLeod reported,

⁷ A gun that cost just 22 shillings would bring the HBC 150-180 shillings worth of fur.

⁸ a gill is about 1/2 cup

“Beaver is become an article of traffic on the Coast as at the Mission of St. Joseph (now Fremont) alone upwards of Fifteen hundred Beaver Skins were collected from the natives at a trifling value and sold to Ships at 3 Dollars.” Thomas McKay trapped 735 beaver and otter on just two small tributaries of the Klamath River. Most of the tributaries to San Francisco Bay were good beaver habitat, with trapping on Alameda Creek, the Napa and Sonoma Rivers, Coyote Creek, and many others. In 1829 Thomas McKay and the Hudson’s Bay Company men took 4,000 beaver skins on the shores of San Francisco Bay. Ten years later the southern party from the HBC under Michel Laframboise trapped 2,700 beaver in the Sacramento-San Joaquin Delta.

The Hudson Bay Company kept the best records of their trading activities and much has been retained. Trapping party leaders were required to keep journals and most survived. The beaver take of the Columbia Department of the Hudson’s Bay Company, with territory throughout Oregon, Washington, northern California, and British Columbia, peaked in 1833 at 21,290 pelts. More than 400,000 were taken from 1820-1840. The American trappers also made great inroads on the California beaver, working over the Sierras and the Sacramento and San Joaquin drainages. Beaver were found as far south as San Diego, where the newspaper as late as 1889 reported *“A beaver weighing forty pounds was on exhibition on Fifth street yesterday, having been trapped by Joe McCord, who lives north of the city. It was the largest specimen ever taken in this section.”*

The operations of the Northwest Company, British ship traders, and American trading are less well understood. Many of these beaver furs went to China. Much of the American trapping was illegal and so was unreported and the Americans were also good at smuggling furs into China. American trappers usually operated in smaller parties of all men and would sell furs to a ship at the coast, a trading post, at the rendezvous, in Santa Fe, or back in St. Louis.

American traders often offered much more for furs than the HBC and many skins were diverted to the mountain fur rendezvous and other trading outlets for these higher prices. In 1825 American traders from the Missouri, a smaller party from Santa Fe, and a large party under Peter Skene Ogden of the HBC in Oregon met near Salt Lake. Ogden’s men had collected many beaver skins and when American Johnston Gardiner (see profile) offered 3 times as much in trade

as the HBC company policy would let Ogden pay many deserted. It was remarkable that any stayed with Ogden. The Americans managed to pick up 700 pelts worth more than \$5,000 in St. Louis.

American fur companies were rapidly working their way west from the Missouri River and Spanish while Mexican fur trappers were working north from Santa Fe. As early as 1810 the Missouri Fur Company reached far to the West and built an outpost at the Three Forks of the Missouri. This was good beaver country but the men were harassed by hostile natives and the post was abandoned. The beaver fur trade really took off after the Ashley-Henry Company increased efforts to reach further west in 1822⁹. In 1824 his men brought in 1,000 beaver skins. He realized that taking the goods to the trappers in the mountains would be more economical than maintaining posts where the trappers had to come and the storied beaver rendezvous was born.

Although the iconic fur trade rendezvous started by Ashley lasted just 15 years, from 1825 to 1840, they provided the drive to clear the mountains of beaver. These wild events were accompanied by steady westward movement of trading posts. Ultimately more than 150 would be scattered throughout the West. They would continue to trade for beaver and other fur bearing mammals even after the collapse in beaver prices.

In 1826 a Made Beaver was worth between \$4-7. Ashley's notes on the 1826 rendezvous show he was delivering goods at the rendezvous for:

Gunpowder, pound	\$1.50
Shot, pound	\$1.25
Flints, dozen	0.50
Knife	0.75
Gun ¹⁰	\$24

⁹ for more information see the bio of Ashley

¹⁰ a Northwest fusil, a smooth bore musket produced in very large quantities, most from England

Blanket, 3 pt	\$9
Scarlet Cloth, yard	\$6
Beaver Traps	\$9
Tobacco, pound	\$3
Coffee, pound	\$1.25
Beads, pound	\$3
Rum, gallon	\$13.50 (a big moneymaker)

Trapper Daniel Potts noted that the costs were often higher, with powder going for \$2.50 a pound, coffee at \$2 a pound, 3 point blankets at \$15 each, scarlet cloth at \$10 per yard and horses could cost from \$150 to even \$500. A good rifle might be \$30 and a good pistol the same or a bit more. Printed fabric was about 30¢ yard, but a pierced broach could cost \$3 and a silk handkerchief \$3.50. With yearly salaries for the contracted trappers ranging from \$200-\$400 it is apparent that even a successful trapper was not necessarily making much money. If you lost a horse, drank too much, bought too many gewgaws for your country wife, or lost traps or guns to the natives you could work hard and not break even. A free trapper could make a good profit if he could stay alive, trap effectively, avoid thefts, and get his skins to market.

The records of the American, Spanish, and Mexican fur trappers and traders are limited. They were also eagerly seeking beaver pelts and determined to use them to help define their territorial claims. The American beaver fur businesses peaked in the 1830s with tens of thousands of beaver taken from the western rivers and shipped down to the coast or more commonly to St. Louis or New Orleans. Indian Agent Thomas J. Dougherty estimated the beaver take on the Missouri River at 375,000 from 1815-1830.

The California beaver were rapidly reduced by the HBC hunting parties from Oregon and American trappers from the East. The total take by all parties in California appears likely to have been about 40,000 beaver. By the 1840s beaver populations were considerably reduced throughout the West. From the Colorado River to Alaska beaver they had been over-harvested and virtually wiped out in many areas. The shift to silk hats reduced demand and market prices. The value of a prime skin dropped from 27 shillings 6 pence in 1839 to just 3 shillings 5 pence in

the 1840s. The HBC Columbia Department took 20,970 beaver in 1839 and only 12,958 in 1846. Beaver trapping continued, but on a lesser, less profitable scale. London sales dropped.

The total number of beaver taken across the West will never be computed because there are too many missing pieces. British trapper Peter Skene Ogden bragged to the American Jedidiah Smith that he had taken 85,000 beaver worth \$600,000 from the just the Snake River drainages. In 18 years the Russians took in more than 40,000 beaver from just one fort in northern Alaska. The Americans were in the game as well with John Dominis and the *Owyhee* returning to London with 9,000 beaver in 1831. If we consider the HBC, NWC, RAC and other efforts it seems likely well more than a million beaver (and perhaps 2+ million) were killed. The catastrophic effects this would have on the landscape are described in Chapter 5.

Recap

When sea otters became scarce more attention was focussed on beaver. The Russians, British, Spanish and Americans all participated in the beaver trade. Once again the Americans had cost and management advantages and made good use of them. Prices were relatively stable for many decades and well managed operations could make money. Trappers and traders were less likely to get rich, but the high level managers like George Simpson and John Jacob Astor did. The price collapse in 1839 gave the beaver a reprieve. Hunting continued but beaver populations gradually recovered in much of British Columbia and Alaska. In the Western US and Rocky Mountains the many areas that need beaver are still missing them (see chapter 5).