

# THE 19TH-CENTURY TRADE IN SWAN SKINS AND QUILLS

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In an attempt to learn more about the pre-settlement numbers of swans in what are now the three prairie provinces, we consulted the records in the Hudson's Bay Archives (HBCA), Provincial Archives of Manitoba, in Winnipeg. Much has been written about the economics of the fur trade in what is now Canada, but little attention has been paid to one important side item of trade, swan skins and swan and goose quills. Few naturalists have realized what prodigious quantities of these two items were shipped from Hudson Bay back to Britain, as an additional item of trade along with valuable furs. Such overharvesting, superimposed on subsistence use, no doubt contributed to the Trumpeter Swan's decline in numbers and range, and to some decline in the Tundra Swan as well.

Samuel Hearne, who founded Cumberland House [Saskatchewan] in 1774, the first inland trading post of the Hudson's Bay Company (HBC), later reported that the Indians killed Trumpeter Swans "in such numbers that the down and quills might have been procured in considerable quantities at a trifling expense; but since the depopulation of the natives by the small-pox ... no advantage can be made of those articles, though of considerable value in England." Hearne also noted that one Trumpeter Swan egg was "a sufficient meal for a moderate man, without bread, or any other addition."<sup>10</sup> One thirty-pound (14 kg)

swan, the heaviest bird in North America, provided a great deal of food for hungry people, especially welcome in spring after a winter diet of fish and pemmican. Hearne also reported that the swan skins "of which the Company have lately made an article of trade," became a trade item only near the end of the 18th century. After quoting from Hearne, Oliver Goldsmith in 1840 wrote: "They are much sought after ... for their flesh, their quill-feathers, and their down."<sup>9</sup> Since *The Fur Trade in Canada: An Introduction to Canadian Economic History*<sup>12</sup> apparently does not mention and certainly fails to index swan skins, our search led elsewhere.

How common was the Trumpeter, east of the Rockies, in the 1600s? By extrapolating from the 1968 density of one swan per 20 km<sup>2</sup> in Alaska, and projecting this over an area of 2.6 million km<sup>2</sup> of the potential 4 million km<sup>2</sup> of prairie and boreal forest east of the Rocky Mountains, Lumsden made a credible estimate for 1600 A.D., really a "best guess" of 130,000 Trumpeter Swans.<sup>13</sup> He felt that annual removal of 3000 to 5000 swans from this population for swan skins, possible only after the advent of firearms, "would not have been an excessive harvest." Such analysis of course presumes no drop in population over two or more centuries. There is good evidence that swans were common at Moose Factory in 1674, but the swan flight into James Bay had almost disappeared

by 1783-85.<sup>13</sup> Whether or not Lumsden's early population estimates are credible, by the 1913 meeting of the American Ornithologists' Union there were predictions that "this magnificent bird was nearing extinction; and would soon disappear forever."<sup>3</sup> Henry Coale could find, in a survey of all museums, only sixteen specimens collected between 1856 and 1909, five of them from Canada, preserved with authentic data. E.S. Cameron reported in a letter to Coale on 30 April 1914: "Twenty years ago Trumpeter Swans were common in [north-eastern] Montana, and used regularly to winter here, but are now on the verge of extinction."<sup>3</sup> By 1935, only 69 Trumpeter Swans were known to exist in the wild, but unrecorded flocks also inhabited parts of Alaska and the Grande Prairie region of Alberta.<sup>16</sup>

The Trumpeter was not the only swan to be affected. The Tundra Swan disappeared as a breeding species from the general area of Hudson Bay for over 150 years, from before 1800 through 1969; they have since returned to breed in northern portions of Manitoba, Ontario and Quebec.<sup>13</sup>

## Swan Skins

The number of swan skins listed for sale in London, 1799-1913, increased from a low of 168 in 1804 to 4305 in 1813. The different number of skins must have represented an increase in interest or value or both, rather than a change in the numbers or availability of swans of both species. The peak years were 1826, 1827, 1830, 1834, and 1837, with 5817, 5052, 5636, 7918 and 6600 swan skins, respectively, sold in those years, the five highest on record (HMR from HBCA, Figure 1). The last time numbers were over

1000 was in 1850, with 1038 skins. Average annual numbers for the decades ending in 1820, 1830, 1840, 1850, 1860, 1870, 1880 and 1890, respectively, were 2735, 3379, 3876, 1897, 981, 627, 190, and 120. The final recording was of 108 swan skins in 1891 (HMR).

These figures are somewhat at variance with and only loosely correspond to those obtained by Roderick Ross MacFarlane, from the Hudson's Bay fur catalogues "for sale in London." From 1853 to 1877 the HBC sold a total of 17,671, or an average of nearly 707 skins a year.<sup>15</sup> The HBC catalogues listed seven good years (1853 to 1856, 1861, 1862, and 1867), with sales ranging in those years between 985 and 1,312, the maximum reached in 1854. There were seven poor years (1870 to 1877), with returns varying between 338 and the minimum of 122 in 1877.<sup>15</sup>

MacFarlane also provides helpful details concerning the major sources of these skins. From 1854 to 1884, inclusive, Athabasca District turned out 2,705 swan skins, nearly all of them from Fort Chipewyan. Mackenzie River District supplied 2,500 skins from 1863 to 1883. From 1862 to 1877 Fort Resolution, Great Slave Lake, contributed 798. For 1889 Athabasca traded but 33, as against 251 skins in 1853. In 1889 and 1890, Île-à-la-Crosse, headquarters of the English River District, sent out only two skins each year.<sup>15</sup> Why were these large swans rarely seen by explorers and traders passing through? One presumes they retreated to large marshes and small lakes for breeding and moulting, off the path of those travelling by river canoe routes, and bypassed by those travelling overland.

# HBC Swan skin annual totals

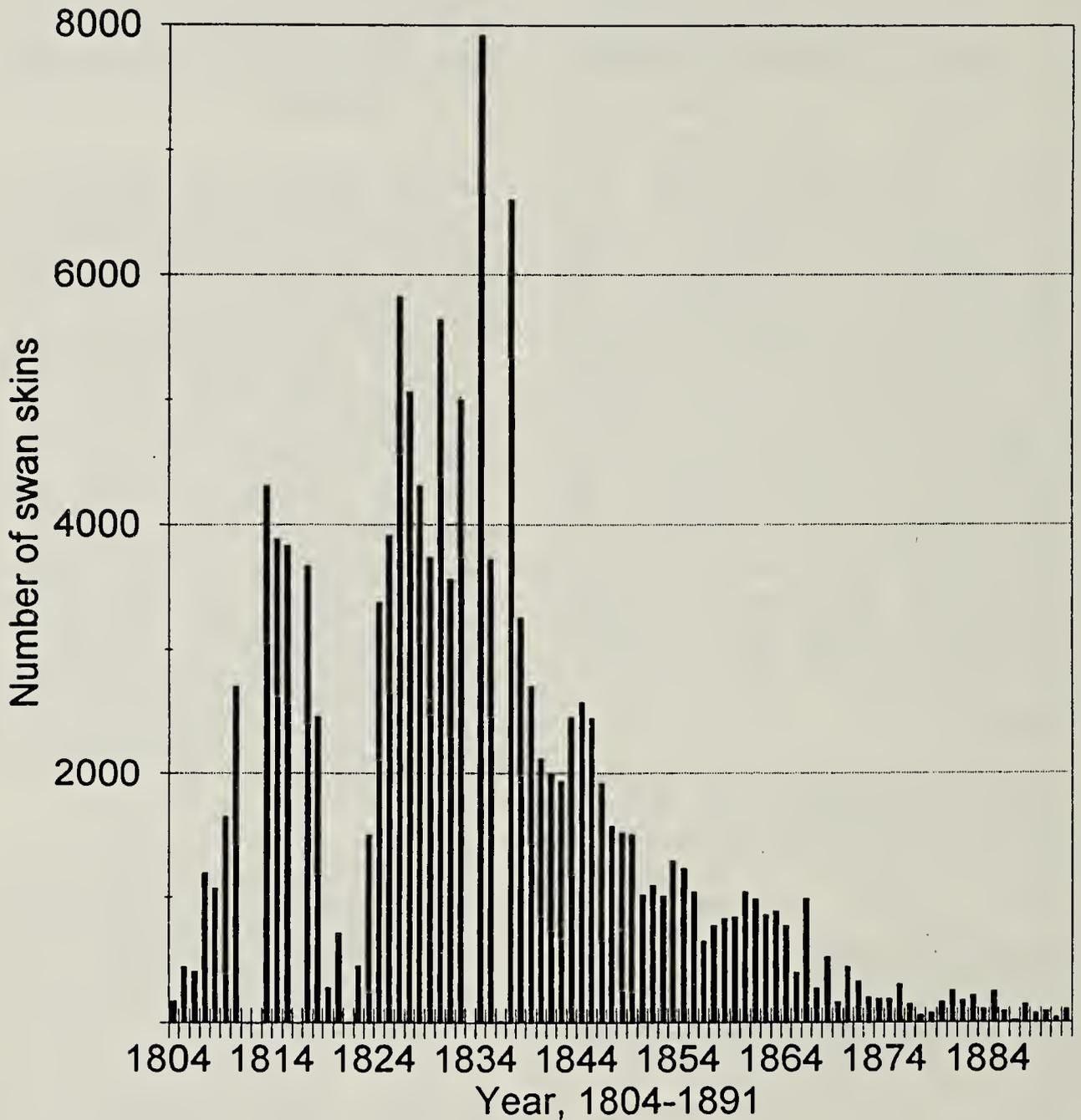


Figure 1. Swan skin annual totals, 1804-1891. Listed for sale by the Hudson's Bay Company, London. Compiled by H.M. Reeves from A.53/1, the *Fur Trade Importation Book, 1719-1912*. Hudson's Bay Company Archives, Provincial Archives of Manitoba (HBCA, PAM).

There is local corroboration from Fort White Earth #1, on the banks of the North Saskatchewan River south of the present town of Smoky Lake, Alberta. Alexander Henry the Younger, immediately after building this fort, reported that his men brought 70 swan skins from nearby Smoky Lake on 23 July 1810, and that eight days later he had 208 swan skins in stock.<sup>4</sup> Cam Finlay reports that at Fort Edmonton, the only

source we know of that specifically identified quills as being from swans, 810 swan skins and 460 swan quills were collected in 1810-11, 1206 skins and 450 quills in 1811-12, and 1316 skins and 2740 quills in 1812-13.<sup>7</sup> All other listings of quills may well have been a combined total of both goose and swan quills. Archaeological excavations have confirmed the presence of Trumpeter Swan bones from Fort White Earth.<sup>11</sup>

**Table 1. SWAN SKINS FROM HUDSON BAY LISTED FOR SALE, 1804-1819**

Year	Churchill	York Factory	Severn	Albany	Moose	Eastmain	Sum Six Posts
1804		168		37			205
1805		435					435
1806		396					396
1807	28	1133		27		4	1192
1808	9	997	1	60			1067
1809	6	1576		70			1652
1810		2706					2706
1811							0
1812							0
1813	219	4066		4		16	4305
1814		3853			16	15	3884
1815	348	3487					3835
1816							0
1817		3666			4		3670
1818		2462			1		2463
1819		273			6		279
Total	610	25218	1	198	27	35	26089

Compiled by H.M. Reeves at HBCA, PAM.

Questions remain as to which species was killed for the swan skin trade, Trumpeter or Tundra (Whistling) or both? Where were they taken? How many were taken only in spring or fall migration? How many in summer, before the immatures could fly and during the adult flightless summer moult? What price did they fetch? What were these swan skins used for? Partial answers require melding of information from archaeological sources, fur trade archives and published historic records, but complete answers are no longer possible.

- 1) Both species were taken, the Tundra Swan only in migration.
- 2) A breakdown by individual trading posts on Hudson Bay, compiled by HMR, is available for 1804 through 1819 (Table 1). Almost 97% (25,218 of 26,089 swan skins) came through York Factory, the direct link with the plains and parkland areas of what are now the prairie provinces, far south of the nesting area of the Tundra (Whistling) Swan.

3) For the subsequent two decades, 1821 through 1841, numbers of swan skins taken in each trading district have been transcribed from HBCA B239/h/1 by MIH (Table 2). The first four areas, in descending order of importance, were the Saskatchewan River (Carlton and Edmonton, which traded with Indians on the plains), Churchill River (then called English River), Athabasca, and the Swan River. Each of these localities was south of the nesting area of the Tundra Swan. With the exception of 1804, these figures correspond exactly with HMR's numbers for sale in London for those years. These inland localities delivered their furs to York Factory, where in the previous two decades these skins would have been listed as from York Factory.

4) A scattering of early historical nest records confirm that Trumpeter Swans bred on the northern Great Plains from Iowa up through North Dakota into Manitoba and Alberta, north into the parklands and

Table 2. DISTRICT FUR RETURNS - SWAN SKINS, 1821-1842

Fur Trade District	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	1837	1838	1839	1840	1841	Total
Athabasca		260			1404	1407	1413	738	2133	71	1286	1202	485	216	340	776	745	736	716	562	560	15050
English (Churchill) River	52	428	1647	1057	890	1289	800	1128	1271	778	975	1108	827	534	639	797	783	502	456	384	310	16655
Cumberland House	24	35	112	222	264	390	232	20	44	46	51	176	196	178	131	71	57	31	42	37	23	2382
Saskatchewan	256	370	408	533	991	1200	1215	1445	1603	2366	2045	2002	1616	1447	1087	904	925	628	433	536	481	22491
Swan River	34	208	189	624	900	375	447	192	139	154	154	507	556	537	488	408	430	385	166	103	118	6960
Lower Red River	17	20	5	60	209	45		8	2	19	24	64	66	246	225	376	199	147	200	171	209	2312
Upper Red River (Minnesota)	10	48	74					8	3	27	26		3									199
Winnipeg (Lake)		8	6	34	27	20	12	25	16	6	18											172
Lac la Pluie	37						1															38
Norway House		2	2	4	15		2	4		1	1	20	20	11	13	8	13	41	28	7	18	210
Island Lake		2		7	24	10	1	4	7	6	14	11	11	5	2	4	1	1	7	5	1	123
Severn	2		3																			5
Nelson River		63	123	78	120	18	6			12	13	12	6	16	14	18						499
Churchill		18	18	51	110	90	62	96	362	168	275	327	154		159	68	68	182	42	154	108	2444
York Factory			73					830		422					48	158	258					1789
Western Caledonia (nil)																						
Totals (each of 21 years)	432	1462	2660	2670	4954	4844	4191	4498	5580	3922	4882	5429	3940	3190	3146	3520	3479	2653	2090	1959	1828	71329

Compiled by M.I. Houston from B239/b/1, HBCA, PAM. Italics = four highest totals

southern mixed forest.<sup>1</sup> Lumsden suggests that this larger species needed an ice-free period of at least 140 days, and preferably 154 days, to complete its long breeding cycle, coinciding nicely with what we know about the northern edge of their presumed breeding, south of that of the smaller Tundra Swan.<sup>13</sup>

5) The most authoritative comment is by Dr. John Richardson, who collected birds at Cumberland House and Carlton House in Saskatchewan in the 1820s; he reported that "It is to the Trumpeter that the bulk of the Swan-skins imported by the Hudson's Bay Company belong."<sup>18</sup> As late as 1859, Blakiston concurred that the Trumpeter was still the commoner species at Carlton.<sup>2</sup>

6) Harry Duckworth (pers. comm.) has recorded purchases in London: in January 1808, Joseph Binter purchased £482 worth of swan skins; George Smith, £227; Peter Raymond Poland, £163; and Schnerot (?), £85. In April 1810, Joseph Binter purchased £195 and Mr. Riechard, £100. If we make a wild assumption that these men purchased all of the 1192 and 1652 swan skins sold in each of those years for the European market, then each swan skin may have been worth nearly £1 in the first instance and one-fifth this amount two years later. If these businessmen purchased only half the swan skins, the amount per skin would double, and if only one-fifth, then the unit value would increase by five times.

7) Wilmore tells us that in Europe swan skins were used in the manufacture of powder puffs for women.<sup>21</sup> One wonders, with the large numbers involved, whether the skins might also have been used for coat linings? Harold Burgess, a

researcher into Trumpeter Swans, has read in historical fiction that swan skins were also used for making vests, ceremonial robes and for ornaments such as epaulets on uniforms of high-ranking officials. Andrew Dawney<sup>5</sup> tells us swan skins were still valued at five pence (25 cents) a pelt in 1899. The beautiful snow white down of the Bewick's Swan, when dressed by a furrier, made women's neck pieces (boas) "of unrivalled beauty." Warwick, Pitz and Wyckoff (1965) illustrate a loose jacket, brought over from Holland by Dutch settlers in New York, "trimmed with fur or swansdown around the neck, down the front, and around the bottom."<sup>20</sup> In Russia the tough skin and warm soft pelt was used for wallets, jackets and caps. Barbara Nichols<sup>17</sup> reports that swan skins were used for powder puffs, quilts, pillows and mattresses. Jack London, in his short story, "The night-born" in *Jack London Short Stories*, mentioned a robe of swan-skins" (Karen Lunsford, pers. comm.). In *Little House on the Prairie*, Pa Ingalls shot a swan and Ma Ingalls made a small swan cape for the youngest girl (Brian Burchett, pers. comm.).

The demand for swan skins was no respecter of species. Earlier in this century, Frank M. Chapman found "hundreds of thousands" of Black-necked Swan skins in an Argentina warehouse awaiting shipment to be made into women's powder puffs.<sup>5</sup>

Judith Hudson Beattie has allowed us to reproduce the official Hudson's Bay Company directive that told traders how to prepare swan skins of the highest value (Figure 2). This printed "broadside" dated from circa 1817, when R. Causton and Son had their office at 21 Finch Lane (Harry Duckworth, pers. comm.). Nearly a

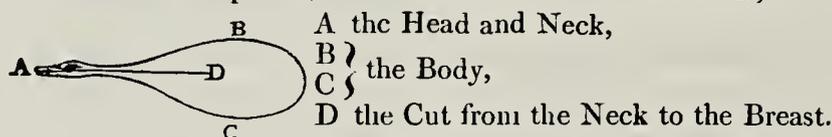
# DIRECTIONS

FOR

## CURING AND PRESERVING

### Swan Skins.

AS Swans are generally shot, let the Feathers be pulled out while the Bird is hot, with the greatest care not to injure the Fine Down underneath; the Blood that may be upon the Skin may be washed off with Soap and Water, and well dried afterwards; the Bird will be skinned much easier after the Feathers are pulled, and must be done in this manner,—



The Back must not be cut, and it is not necessary, as the Bird may be skinned by drawing it through the Part cut from the Head to the Breast; when dry, it may be turned the Pelt or Skin outside, which will protect the Down from being injured by Grease, &c. and will come safe in Packages any distance.

N.B. The Swan Feathers should not be mixed with those of the Goose.

Printed by R. Causton & Son, 21, Finch-Lane, Cornhill, London.

Figure 2. Directions for curing and preserving swan skins [ca 1817]. HBCA A.63/22 fo.3 (N13516). Courtesy Judith Hudson Beattie and HBCA, PAM.

half-century later, the Governor and Committee gave very similar instructions to Ferdinand Jacobs on 12 May, saying “We are informed that the skin of the Wild Swan may probably turn out of some utility in our trade ...”(HBCA A.6/11, fo 170d).

### Swan and Goose Quills

The flight feathers of all birds were long known as quill-feathers. Some clues to the increasing interest in quills as a commercial item derive from entries in the 1942 edition of *Encyclopedia Britannica*. Under Feather: “The earliest period at which the use of quill feathers for writing is recorded is the 6th century ... Only the five outer wing feathers of the goose are useful for writing, and of these the second and third are the best, while left-wing quills are more esteemed than those of the right as they curve outward and away from the writer using them. ... Swan quills indeed are better than those from the goose.”<sup>14</sup> Under Pen:

“In 1809 Joseph Bramah devised and patented a machine for cutting up the quill into separate nibs by dividing the barrel into three or even four parts, and cutting these transversely into two, three, four and some into five lengths.”<sup>6</sup> Under Bramah: “Joseph Bramah, 1748-1814, was an English engineer and inventor, who invented the hydraulic press, paper-making machinery, a numerical machine for printing bank-notes, and the Bramah lock.”

Until improved nibs were invented, quills required continual sharpening. The average clerk would use more than one new quill pen per day. “Bed-feathers” were first sold by the HBC in the London market in November 1736 and “goose quills” were first offered in December 1744 and November 1745 (Harry Duckworth, pers. comm.). Swan quills were in greater demand and sold (in bundles of 25 or 100) at the highest price. Swan and goose quills from Hudson

## HBC Quill Annual Totals

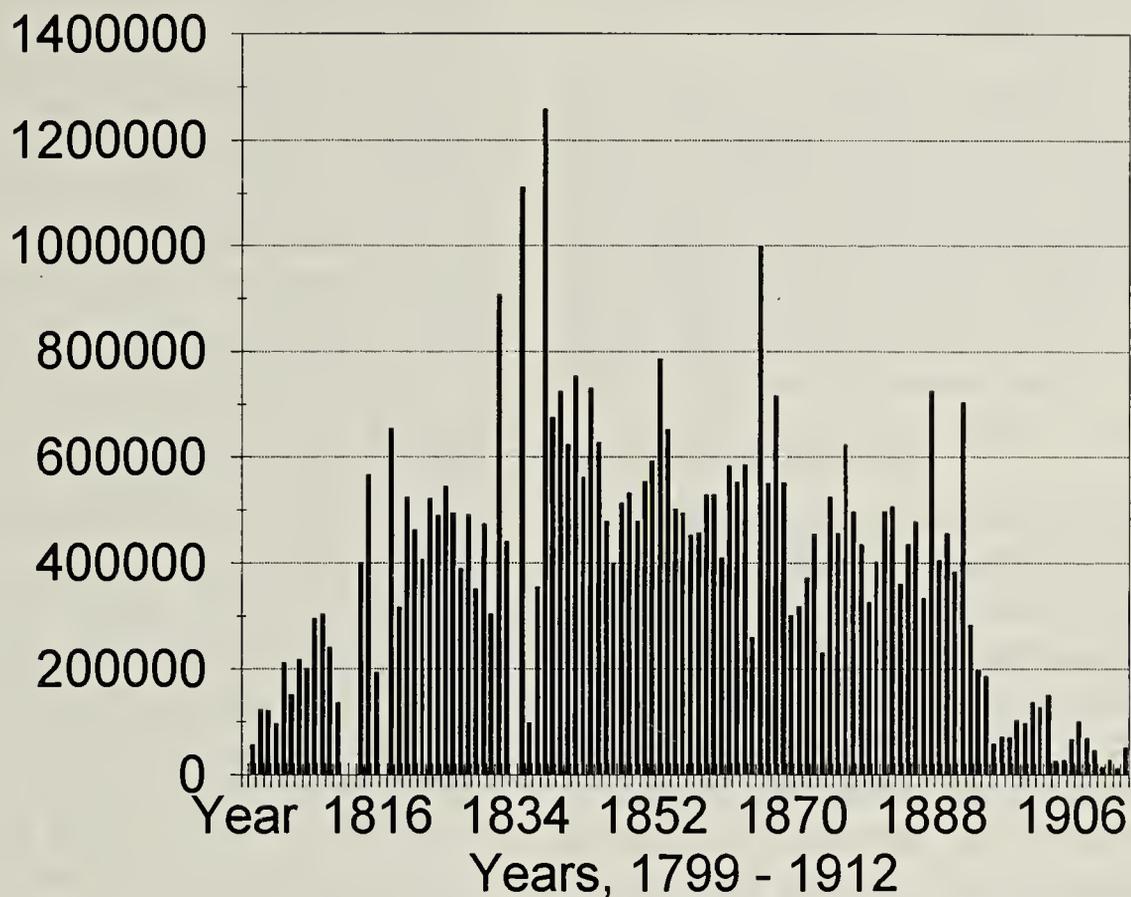


Figure 3. Goose and swan quill annual totals, 1799-1911. Listed for sale by the Hudson's Bay Company, London. Compiled by H.M. Reeves at HBCA, PAM

Bay sold in increasing numbers, from 58,000 in 1799 to 566,632 (think of the tedium involved in counting them!) in 1814 and 655,030 in 1817 (HMR from HBCA, Figure 3). Sales peaked at 1,112,000 in 1834 (the year that a grand total of 18,732,000 quills were sold in London<sup>7</sup>) and 1,259,000 in 1837. At a maximum of ten useable quills per bird, 1837 saw the sacrifice of over 100,000 swans and geese.

There is only a modest correlation between the number of swan skins and the number of quills sold in a given year. The climate was colder then than now, and sailing ships each year ran the gauntlet of icebergs in Hudson Strait. The four years when no skins and no quills were sold in London were years

when the annual ship or ships were unable to return to England, and each gap was followed by an abnormally high total. The first gap of two years may be explained because the *Edward and Ann*, carrying the first 105 Selkirk settlers bound for Red River, was too pressed to make the customary stop at Churchill. The 1811 voyage, taking 61 days, set an all-time record. In 1812, the problems of war with the United States may have been reflected as far north as Hudson Bay. In 1816 the *Prince of Wales* was caught in ice and did not return to England and in 1833 the *Prince Rupert V* suffered a similar fate. Extremely low numbers of skins and low-average numbers of quills in 1836 perhaps resulted from two of the three ships that year having to winter in the bay, while the *Prince*

*Rupert V*, after being beset in ice from 23 August to 19 September, returned without fully unloading its inbound cargo.

In general, sales of quills and swan skins both peaked in the 1830s, but quantities of the prime "Hudson Bay quills" presumably came from geese. Quill numbers did not fall off as quickly as did swan skins, and remained relatively high through 1891.

Finlay's informative book, *The History of the Quill Pen*,<sup>8</sup> shows that at one time, crow quills, for architectural drawing, fetched as much as 9 shillings per 100; turkey quills, for law writing, were 7 shillings; domestic goose quills, 15 shillings; "Hudson's Bay quills" and swan quills each went as high as 63 shillings per 100. In England, huge flocks of geese were farmed mainly for their quills; in 1812 nine million geese were plucked for the domestic market. The quills of the wild geese from North America were even more highly regarded, since "the best quills came from the coldest countries." Swan quills were even better, "a single swan outlasting as many as fifty made from goose quills." The five largest feathers from each wing were used. The first primary was called a pinion; the second and third were labelled "seconds" and the fourth and fifth, "thirds."<sup>8</sup> There was a tradition that swans' quill pens were left full feather.<sup>8</sup>

Quills were obviously big business; 27 quill and pen manufacturers and dealers were listed in *Pigot's London Directory* (1822), while Newcastle-upon-Tyne had three. Though metal pens became available in the 1820s, most writers and almost all lawyers preferred the quill, as it "enables an expert Scribe to both text and en-

gross in a better style, and to cut the letters more clearly."<sup>8</sup> The last large year for quills from Hudson Bay was 1865, when the total was just one thousand short of the million mark. Numbers dropped to 59,000 in 1895, reflecting increasing competition from the development of metal pen nibs. In the last two years on record, 1911 and 1912, 12,000 and 52,000 quills, respectively were sold (Figure 3). Manufacture of metal pen nibs became common in the United States in the 1860s, but it is apparent that not all writers switched for another half-century. As late as 1894, one firm supplied the India Office with more than two million quill pens, and in 1908 swan pens were sold with gold- and silver-plated tips. The last quill company closed its offices in London in 1954, when computer "punched card systems" were now in evidence!<sup>8</sup>

### Swans as Food

In medieval England ownership of swans was a mark of social standing. As a food item, especially as the set-piece for banquets, a swan was extremely expensive, selling in London in 1274 for three shillings (36 pence), compared to five pence for a goose and four pence for a pheasant. The punishment for stealing swan eggs was imprisonment for a year and a day. For stealing a swan, the thief had to pour wheat over the suspended bird, hung by its beak, until the tip of the beak was covered; the wheat was then paid to the swan owner.<sup>5</sup>

### Trumpeter Swan Populations in North America

Bones from early historic sites suggest that the Trumpeter Swan suffered from more drastic declines than other large birds such as the Sandhill and Whooping Cranes. All

these species fared poorly with settlement, and were driven out as land was ploughed and marshes drained. Trumpeters began their decline at least a century earlier than the cranes. Originally breeding from at least Kentucky and from Chesapeake Bay north to the maritime provinces and wintering south to northern Florida, Trumpeters quickly disappeared from eastern North America as humans advanced inland.<sup>19</sup> Undoubtedly subsistence taking of its eggs and meat as prime food items antedated recorded history, but later demand for its skins and quills added to its demise. As Banko summarized in his classic monograph in 1960, "The effects of such exploitation on the far-flung breeding populations of this species for more than 125 years must have been devastating and largely responsible for its extermination over vast regions, particularly in the heart of its Canadian breeding range."<sup>1</sup>

We strongly suspect that the pre-1900 falling-off in numbers of Canadian swan skins sold each decade in London reflected over-harvesting of these large birds, aggravated by collecting of both the swans and eggs in season for food, especially after bison numbers fell drastically in mid-century.

Extinction of the Trumpeter Swan was narrowly averted at the turn of this century. With protection, numbers have increased in a gratifying manner, such that the Pacific Coast population in Alaska increased to 9500 individuals by 1991, while the Rocky Mountain population (including northern Alberta) increased eleven-fold to 2200 individuals. The restored interior population had 629 free-flying birds by 1993.<sup>16</sup> Trumpeter Swan reintroduction programs are gaining speed wherever they have been attempted; in southern

Ontario they began in 1982. On 1 September 1995 there were 82 Trumpeters flying free and one year later, 123 (Harry Lumsden, pers. comm.). Trumpeter Swan's recovery has been sufficiently successful that it has been de-listed from the federal endangered species list. However, we should learn from the history of its exploitation there are better methods to manage our wildlife resources.

### Acknowledgements

We thank Judith Hudson Beattie, keeper of the Hudson's Bay Archives, Provincial Archives of Manitoba, for continued help and support, and for providing the print of the broadside giving directions for preparation of swan skins. Harold Burgess found two sources of information concerning the use of swan skins. Ruth E. Shea and Rod C. Drewein provided constructive criticism of an earlier draft. Harry Duckworth provided dates for operation of the R. Causton printing firm in London, payments made for swan skins in London, and, on our behalf, posed a question to members of the 18th Century Interdisciplinary Discussion Group on e-mail, which brought helpful responses from Karen Lunsford at the University of Chicago and Brian Burchett at the University of North Dakota. Cam Finlay provided data on swan skins and quills from Fort Edmonton.

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## Bird Names

Anna, Duchess of Rivoli (1806-1896), wife of Prince Victor Massena and daughter-in-law to one of Napoleon's marshals, Andre Massena, Duc de Rivoli — Anna's Hummingbird and Rivoli's Hummingbird for Victor.