

The Hudson's Bay Company as a Context for Science in the Columbia Department

Brian Schefke

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[See table of contents](#)

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Article abstract

This article aims to elucidate and analyze the links between science, specifically natural history, and the imperialist project in what is now the northwestern United States and western Canada. Imperialism in this region found its expression through institutions such as the Hudson's Bay Company (HBC). I examine the activities of naturalists such as David Douglas and William Tolmie Fraser in the context of the fur trade in the Columbia Department. Here I show how natural history aided Britain in achieving its economic and political goals in the region. The key to this interpretation is to extend the role of the HBC as an imperial factor to encompass its role as a patron for natural history. This gives a better understanding of the ways in which imperialism—construed as mercantile, rather than military—delineated research priorities and activities of the naturalists who worked in the Columbia Department.

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Brian Schefke

University of Washington

Abstract: This article aims to elucidate and analyze the links between science, specifically natural history, and the imperialist project in what is now the northwestern United States and western Canada. Imperialism in this region found its expression through institutions such as the Hudson's Bay Company (HBC). I examine the activities of naturalists such as David Douglas and William Tolmie Fraser in the context of the fur trade in the Columbia Department. Here I show how natural history aided Britain in achieving its economic and political goals in the region. The key to this interpretation is to extend the role of the HBC as an imperial factor to encompass its role as a patron for natural history. This gives a better understanding of the ways in which imperialism—construed as mercantile, rather than military—delineated research priorities and activities of the naturalists who worked in the Columbia Department.

Résumé : Cet article travail vise à élucider et analyser les liens entre la science — spécialement l'histoire naturelle — et le projet impérialiste dans ce que nous appellons aujourd'hui le Nord-ouest américain et l'Ouest canadien. L'impérialisme dans cette région s'exprime par l'entremise d'institutions telle la Compagnie de la Baie d'Hudson (HBC). J'examine les pratiques de naturalistes tels David Douglas et William Tolmie Fraser dans le contexte du commerce de la fourrure au sein du 'Columbia Department'. Je démontre ici comment l'histoire naturelle sert la Grande-Bretagne dans l'accomplissement de ses objectifs politiques et économiques dans la région. La clé de cette interprétation réside dans l'extension du rôle de la HBC comme facteur impérial pour englober son rôle de patron des sciences naturelles. Cette approche favorise une meilleure compréhension des voies par lesquelles l'impérialisme — ici conçu comme mercantile, plutôt que militaire — délimite les priorités et les activités de recherche des naturalistes qui travaillent dans le 'Columbia Department'.

Between the 1770s and 1846, the Pacific Northwest¹ was a region of intense imperial competition. The Spanish sent a series of expeditions north from Mexico in the mid-1770s, hoping to gain a foothold along the Northwest Coast and stave off the expansion of both the British and Russian empires.² The Russians, having arrived in Alaska in the 1740s, pushed south along what is now the Alaskan panhandle. The British, for their part, sent a number of naval expeditions to the Northwest; the most notable of these were the Cook expedition of 1778 and the Vancouver expedition of 1792, though a number of independent British merchants also made journeys to the Northwest, especially along the outer coast of Vancouver Island. By the 1790s, the Spanish were eliminated from the contest, Russian expansion had begun to stall, and the primary competitors for control of the Northwest were the British and the Americans, whose merchant ships had begun arriving in the late 1780s. From that point on, imperialism in the Northwest, particularly on the part of the British, was largely economic in nature and the struggle was waged by trappers and traders.

This essay concerns natural history as one of the tools wielded by the Hudson's Bay Company (HBC), the primary agent of the British Empire in the region. Natural history helped to reinforce the economic imperialism at work in the Pacific Northwest; furthermore, the HBC served as an important node in a broader imperial network upon which natural history depended, and within which the science was shaped by imperial commitments. Founded in 1670, the HBC is one of the oldest continuously operating capitalist institutions in the world.³ Its original charter gave it a trade monopoly over what was known then as Rupert's Land (named after one of the company's founders, Prince Rupert); this area comprised Hudson Bay and all lands drained by rivers flowing into the bay. The Crown, having granted this charter of monopoly, was also content to leave to the HBC the task of keeping order in Rupert's Land, which meant that the Company effectively acted as a quasi-state on behalf of the English (later British) government. By 1821, with permission granted by Parliament, the HBC merged with its major rival, the North West Company (NWC), and extended its monopoly (and quasi-state) functions west of the Rocky Mountains.

1. By "Pacific Northwest," I mean the territory encompassing the present-day American states of Idaho, Oregon, and Washington, the Canadian province of British Columbia, and the adjacent coastline.

2. See Warren L. Cook, *Flood Tide of Empire: Spain and the Pacific Northwest, 1543-1819* (New Haven: Yale University Press, 1973).

3. The literature on the HBC is rather extensive, but the most authoritative general source on its history (up to 1870) is E.E. Rich, *Hudson's Bay Company, 1670-1870*, 3 vols. (New York: Macmillan, 1960).

As the HBC expanded into the Pacific Northwest, it brought with it support for natural history. Knowledge of natural history was useful to the company's business, particularly in a region of abundant resources like the Northwest. In addition, the HBC aided naturalists whose work had no apparent financial benefit to the company, and this involvement with science dates back to at least the eighteenth century. Several HBC employees were active in observing and cataloging the flora and fauna of Rupert's Land as well as making meteorological observations, the latter being of the most obvious commercial interest given the harsh climate of Hudson Bay and the lands adjacent to it.⁴ Though most of these men had little or no training in natural history (with the exception of the surgeon Thomas Hutchins), their observations were deemed valuable by organizations like the Royal Society, who were more than happy to take advantage of the HBC's presence in the most remote parts of North America. Indeed, HBC men such as Christopher Middleton (in 1742) and Hutchins (in 1783) were among the winners of the Royal Society's most prestigious award, the Copley Medal.⁵ While it would be overstatement to suggest that the HBC's interest in science was consistently high, the HBC provided valuable support for science on multiple occasions well into the nineteenth century.⁶

Hutchins' award came while the Royal Society of London was under the presidency of Joseph Banks, who established a network of natural history yoked to the expansion of the British empire. Hence, the HBC participated in imperial science on multiple levels. As a commercial manifestation of British influence in North America, the HBC had considerable interest in knowledge of the resources of the lands in which it operated. To best make use of these resources, HBC employees needed to be observant of the conditions of the land around them; those with training in natural history could only help that, even if such training was not the primary reason for being hired by the HBC. On another level, the HBC's infrastructure in North America comprised a number of nodes in the imperial network that had begun to be established in the eighteenth

4. Stuart Houston, Tim Ball, and Mary Houston, *Eighteenth-Century Naturalists of Hudson Bay* (Montreal and Kingston: McGill-Queen's University Press, 2003).

5. *Ibid.*, 72.

6. For an example of the HBC's support of science during John Franklin's famed Arctic expeditions, see Stuart Houston, ed., *Arctic Ordeal: The Journal of John Richardson, Surgeon-Naturalist with Franklin, 1820-1822* (Montreal and Kingston: McGill-Queen's University Press, 1984). The ultimate fate of Franklin's lost third expedition to the Arctic in 1845 was determined by HBC trader John Rae in 1854, himself an explorer of no mean quality. See, for example, John Rae, *Narrative of an Expedition to the Shores of the Arctic Sea, in 1846 and 1847* (London: T. & W. Boone, 1850).

century by such figures as Banks.⁷ This infrastructure enabled both HBC employees and those from other organizations who traveled to North America to participate in imperial science and bring knowledge of the “exotic” to Britain.

The Fur Trade Context in the Pacific Northwest

The HBC, under the leadership of its overseas Governor, George Simpson, made the Pacific Northwest—the HBC’s administrative designation for the region was the Columbia Department—a source of significant profit for the company. Simpson and his subordinates, such as John McLoughlin, the head of the Columbia Department, instituted a number of policies aimed at maintaining profitable fur returns, making posts self-sufficient in terms of provisions, diversifying trade goods beyond fur, and especially eliminating American competition.⁸ All of these activities to a greater or lesser extent drew on a working knowledge of the region’s natural history, collected by the company’s employees and other agents and from native informants. With respect to self-sufficiency and expanding the trade, Simpson enacted a policy of establish farms at posts where the land would sustain them; surplus food was exported as well as salmon and timber obtained locally. With respect to maintaining a fur supply and American competition, Simpson’s policies included regulation of trapping, re-entering the maritime trade, and most ambitiously, the creation through overtrapping of a “fur desert” in the Snake River basin. This “fur desert” served as a buffer between American trappers coming from the east and the HBC’s most prized fur trapping territory in New Caledonia.⁹ By the 1830s, Simpson and the HBC had achieved these goals, and the company along with native peoples controlled the trade of the Pacific Northwest.

Until the partition of the region under the terms of the Oregon Treaty in 1846, the HBC was the most important source of European and Euroamerican authority in the Pacific Northwest. The HBC supported the practice of natural history and put it to use, though it was certainly not the first mercantile organization to do so. The NWC, as mentioned above, had employees that made significant contributions to expanding Europeans’ knowledge of the interior of North America. Though it has received little attention from scholars, the Pacific Fur Company supported natural

7. David Philip Miller and Peter Hanns Reill, eds., *Visions of Empire: Voyages, Botany, and Representations of Nature* (New York: Cambridge University Press, 1996)

8. Ibid., 44-68; James R. Gibson, *Farming the Frontier: The Agricultural Opening of the Oregon Country, 1786-1846* (Seattle: University of Washington Press, 1985).

9. Mackie, 64.

history as well. Wilson Price Hunt's overland journey to Fort Astoria attracted two naturalists, John Bradbury and Thomas Nuttall, whose observations enabled them to produce major publications that established their scientific reputations: Bradbury's *Travels in the Interior Parts of North America*, published in 1819 and Nuttall's two-volume *Genera of North American Plants*, published a year earlier. Robert Stuart, a partner of the Pacific Fur Company, was himself a naturalist who made extensive observations of flora and fauna on his journey eastward from Fort Astoria to St. Louis in 1812-13.¹⁰

The HBC, therefore, continued a pattern established by its predecessors in supporting natural history and this support deserves greater attention, especially given the HBC's relatively long-standing presence in the region. The Columbia Department became an important focal point for both the HBC's fur business (as it contained the rich trapping grounds of New Caledonia) and natural history work.

Natural History in the Columbia Department

Knowledge of natural history was key for an understanding of the Pacific Northwest and its potential for profit. Hence, the abilities of naturalists working in the region were of considerable value to the HBC. We can point, in particular, to such naturalists as David Douglas and William Tolmie as exemplary of this fact. In the particular case of Tolmie, he came into the service of the HBC with a set of skills the company sought to utilize. He was a physician, a profession sorely needed in the remote and lightly populated Columbia Country, but was also an active naturalist. He made extensive observations of the flora and fauna of the region and took note of native languages of the area with an eye for translating them into English.

Evidence of a working knowledge of the territory to the HBC can be found in the reports and correspondence of HBC employees themselves. Annual reports prepared for the company's governor and committee in London by the chief factor, John McLoughlin, contained not only business-related information such as fur returns, but also observations of the lands of the Columbia Department:

Navigable rivers: Columbia, Willamette, Cowlitz...Umpqua, McLeod's [i.e., the Rogue] River.

Nature of the country: alternate plains & hills, the latter mostly covered with wood.

10. James P. Ronda, *Astoria and Empire* (Lincoln: University of Nebraska Press, 1990), 315-320.

Soil & vegetable productions: high grounds rocky & light; soil around Willamette, Umpqua & McLeod's is very fine; vegetable productions are various & afford partial sustenance for the natives

Fur bearing animals: Beaver, sea otter, a few muskrats & minks. Indians report many sea otter along the shores of the Oceans, but are hard to kill because they sleep in the breakers.¹¹

Reports also contained information on specific uses of natural products. In describing some of the trees to be found in the region, McLoughlin noted in one report that he found along the banks of the Columbia some trees "very short and of a different species from any I have seen in Canada," which were therefore unsuitable for use as planking. In the same report, McLoughlin remarked that the only timber of use "is a species of Norway pine about Ft. George," the former home of the Astorians that lay approximately ninety miles west of Ft. Vancouver.¹² Similar reports were written with regard to other HBC districts in the Pacific Northwest. Most of them followed the same general pattern as did McLoughlin's report, suggesting a standardized practice of observing the natural characteristics of the land and assessing their potential for profit.¹³

The governor and committee also sometimes sent instructions to McLoughlin regarding the resources of the department:

Have the goodness to forward to us the specimens both of the Coal on Vancouver's Island and on the Cowlitz in order that we may know their qualities respectively and you will be pleased to describe particularly the positions of the different veins of Coal and notice the difficulties or facilities as the case may be of working the mines.¹⁴

The utility of a broad range of natural resources was apparent to the upper management of the HBC. McLoughlin's observations demonstrate that his natural knowledge was not simply ancillary to his duties as chief factor, but was considered by his superiors to be integral to them. This helped the HBC make the most profitable use of the natural resources available in the Columbia Department. Natural history, as defined earlier, further answered this need; the systematic description and classification of plants and animals enabled the company, for example, to affix labels to

11. Hudson's Bay Company Archives, Winnipeg, Manitoba (hereafter referred to as HBCA), document no. B223/e/1-4, reel no. 1M783, Fort Vancouver, Report on District, 1826-27.

12. HBCA, document no. B223/e/1-4, reel no. 1M783, Fort Vancouver, Report on District (undated).

13. HBCA, document no. B45/e/1, reel no. 1M777, J.W. Dease, "Fort Colville Report on District"; HBCA, document no. B45/e/2, reel no. 1M777, John Work, "Answers to Queries on Natural History."

14. HBCA, document no. B.223/c/1, reel no. 1M384, Governor and Committee (hereafter referred to as G & C) to John McLoughlin, December 31, 1839.

the wildlife it harvested and market these natural products in a manner it thought the most profitable.¹⁵

Though the HBC had a well-earned reputation for being intensely focused on profit, its involvement with natural history sometimes reflected a broader interest in the promulgation of natural knowledge. The governor and committee noted in a letter to McLoughlin approval of objects collected during the trip of the company ship *William & Ann* along the Northwest Coast in 1825:

The Curiosities collected during the Trip of the William & Ann along the Coast were very acceptable and have made a considerable addition to a small museum now forming here, and we have to desire that any interesting specimens of natural history which may be collected should be sent home especially those which will not take up much room.¹⁶

While the governor and committee clearly showed its priorities in directing that “interesting specimens” should not be too bulky so as to take away valuable space from beaver pelts, it also demonstrated an interest on the part of company officials in the general pursuit of natural knowledge. Natural history was accessible to popular participation, albeit not to the extent as that of a trained expert. George Simpson expressed this interest as well as his own limitations in his journal written during his first trip to the Columbia Department in 1824-25:

The Columbia presents a wide field for botanical research as there is a great variety of Plants to be found every where; I regret exceedingly that my ignorance of that interesting branch of Science prevents my attempting any description of them. Indeed any one of experience in the study of natural history generally would add much to his stock of knowledge therein by a visit to this part of the World. Specimens of every kind within our reach will this season be sent Home as I have given directions to that effect at the different Establishments...¹⁷

Despite his admissions to “ignorance,” Simpson’s enthusiasm for natural history is apparent in his instruction to collect samples, which were both for his own possession and for public display in the company’s natural history museum housed in its London headquarters. Clearly HBC officials

15. See Lorne Hammond, “Marketing Wildlife: The Hudson’s Bay Company and the Pacific Northwest, 1821-49,” *Forest and Conservation History* 37, 1 (1993): 14-25. Hammond notes that the HBC sometimes disagreed with naturalists’ classification of fur-bearing animals when such classification conflicted with the identity of a commercial product that the company had established.

16. HBCA, document no. B.223/c/1, reel no. 1M384, G & C to McLoughlin, Sept. 20, 1826.
17. Frederick Merk, ed., *Fur Trade and Empire: George Simpson’s Journal Entitled Remarks Connected with the Fur Trade in the Course of a Voyage from York Factory to Fort George and Back to York Factory 1824-5*, rev. ed. (Cambridge, MA: Harvard University Press, 1968), 111-112.

found it worthwhile to engage in the practice, at least on a superficial level, of natural history alongside their business operations.

In addition to the acquisition of natural knowledge in the course of its own operations, the HBC also supported the work of scientific societies, as seen here in another letter dated 1839 to McLoughlin:

An assistance has been requested by the Geographical Society to make a few observations on the frozen soil within the range of our operations in N. America and likewise in reference to a Barometrical Thermometer intended to ascertain the heights of Mountains. We are anxious to promote those scientific researches...you will request the Gentlemen, who may be instructed to give our intention to those interesting questions to prepare particular reports and to forward them as early as possible under cover to us.¹⁸

Though such knowledge as the Geographical Society asked the HBC to collect may have had some value to the HBC's business, the fact that the HBC acted at the behest of the Geographical Society and that the governor and committee say nothing more about the value of making the observations beyond addressing "interesting questions" suggests a desire on the part of the HBC's leadership to promote knowledge not obviously applicable to its business interests. The HBC had a rather close relationship with the Geographical Society; company officers, such as Governor J.H. Pelly, were members of and frequently corresponded with the Society and the Society sponsored expeditions in HBC territory.¹⁹

The assistance the HBC gave the Geographical Society also indicates another aspect of its role as an imperial factor in the Columbia Department. The global reach of British mercantile institutions like the HBC and the East India Company made their facilities nodes in multiple imperial networks. The economic and political networks of which they were a part are more apparent, but the practice of natural history by Europeans also benefited greatly by the presence of British imperial institutions. In essence, a natural history network emerged out of Britain's imperial enterprise. The global reach of the British empire gave British

18. HBCA, document no. B.223/c/1, reel no. 1M384, G & C to McLoughlin, September 14, 1839. This particular study is more fully explained in a letter to the Society by the explorer, surgeon and naturalist John Richardson, "Note on the best Points in British North America for making Observations on the Temperature of the Air; and also for the Height of the Station above the Level of the Sea," *Journal of the Royal Geographical Society* 9 (1839): 121-125.

19. Pelly's membership is listed in *Journal of the Royal Geographical Society* 1 (1831): xviii, which made him among the earliest members of the Society. Like many learned societies in Britain, the Geographical Society began informally—in this case, as a dining club in 1830—and was soon after institutionalized. Given Pelly's standing among London's commercial elite as the governor of a chartered monopoly, it is quite likely he was a member at its founding.

scientific institutions access to new flora and fauna that they might not otherwise have had.²⁰ This is reflected both in the internal natural knowledge gathering of the HBC and in the assistance it lent to scientific societies by collecting information for them or by providing logistical support to their naturalists. All of these more general observations are borne out by a closer examination of the specific cases of some of those who undertook natural history investigations under the HBC's aegis.

Naturalists in the Pacific Northwest

More specific examples of the connections between natural history and the HBC in the Columbia Department can be found in the work of individual naturalists, all of whom had relationships with the HBC in some way. Some, such as the botanist David Douglas, of the Royal Horticultural Society, were emblematic of the ways in which natural history societies made use of imperial institutions like the HBC and, in turn, the ways in which the HBC itself supported natural history research more broadly. Others, such as William Fraser Tolmie, a physician employed directly by the HBC and who eventually rose to head the company's Fort Victoria post, pursued natural history not only as an avocation, but also in service to the company's business interests.

David Douglas is one of the better-known naturalists to journey to the Northwest in the nineteenth century. In 1824, in the employ of the Royal Horticultural Society, Douglas boarded the HBC vessel *William & Ann*, and journeyed to Fort Vancouver, arriving there in April 1825. In a journal that he kept of his voyage, he explained his assignment:

While so much geographical information has of late years been added to the general stock of knowledge, and so many distinguished individuals have assiduously devoted their talents to the investigation of the northern parts of this continent, the Horticultural Society being desirous of making known to the British gardens the vegetable treasures of those widely extended and highly diversified countries, resolved on sending a person qualified in the modes of collecting and preserving botanical subjects and of transmitting seeds to England.²¹

Douglas spent the remainder of the spring and summer of 1825 botanizing in the vicinity of Fort Vancouver and up the Columbia River. A typical entry in his journal is as follows:

20. See, for example, Lucile H. Brockway, *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens* (New York: Academic Press, 1979) and Brent Elliott, *The Royal Horticultural Society: A History, 1804-2004* (Chichester: Phillimore, 2004).

21. David Douglas, *Journal Kept By David Douglas During His Travels in North America, 1823-1827 Together with a Particular Description of Thirty-Three Species of American Oaks and Eighteen Species of Pinus* (New York: Antiquarian Press, 1959), 51.

From this period till May 10th, my labour in the neighborhood of this place was well rewarded by *Ribes sanguineum*, *Berberis aquifolium*,... I returned to Fort Vancouver at the end of the month, having increased my collection by seventy-five species of plants, a few birds and insects, and four quadrupeds.²²

Douglas reflected very positively on the support he received from McLoughlin from the time he arrived at Fort Vancouver:

All my papers and trunks were sent on shore on the 16th [of April], and on the 19th I embarked in a small boat with John McLoughlin, chief factor, who received me with every demonstration of good feeling and gave me all kindly offices which he had in his power to bestow.²³

After spending the winter of 1825-26 at Fort Vancouver, Douglas then journeyed again up the Columbia and to the interior, stopping at various HBC posts along the way and sending plants he collected back to Vancouver to be transported via the yearly ship back to Britain. Douglas remarked on the assistance provided by McLoughlin in enlisting HBC employees to help Douglas with his mission:

I have furnished him [Jean Baptiste McKay, an HBC trapper] with a few paper bags, a little paper, and some fine shots to procure me some small birds which will be sent to me in the course of the summer. I was much indebted to Mr. McLoughlin for the trouble he took to explain to him what I wanted, and at the same time enjoined him to obtain them for me by some means or other.²⁴

As Douglas was preparing for his journey on the spring express destined for York Factory, he once again noted the allowances granted to him by McLoughlin:

By the kindness of Mr. McLoughlin, I was enabled to pack up thirty quires of paper weighing 102 lb., which, with the whole of my other articles, is by far more than I could expect when the difficulty and labour of transportation is taken into consideration.²⁵

After journeying as far as Kettle Falls, Douglas returned to Vancouver in the fall of 1826, journeyed down the Willamette (then known as the Multnomah River), returned to Vancouver to winter there from 1826-27, then journeyed back into the interior, this time all the way to York Factory, where he took a ship back to Britain in August 1827.

Douglas' work in the Pacific Northwest garnered him considerable recognition. His patrons at the Horticultural Society were so delighted with the specimens and seeds he sent to Britain that the Society promised

22. Douglas, 56.

23. *Ibid.*, 57.

24. *Ibid.*, 156.

25. *Ibid.*, 157.

him all profits from any publications resulting from his work in North America. Other honors included election to membership in the Linnaean, Zoological, and Geological societies with all fees waived for his entire lifetime. The plants he sent back were growing in gardens all over Britain by the time Douglas returned; Douglas was hailed as having expanded British gardens more than any other collector had.²⁶ Douglas was, by 1829, eager to return to the Pacific Northwest and did so, again with the support of the HBC. Instead of remaining in the Northwest, Douglas went south to California, returned to the Columbia Department in 1833, and traveled to Hawaii in 1834, where he died, apparently by accident.²⁷

While Douglas' botanizing had little if any commercial value to the HBC, his scientific work in the Pacific Northwest fit into larger patterns of imperial science. The Horticultural Society's mission compelled its collectors to find as many new plants as possible that could take root in British gardens. Thus, in the Northwest, Douglas was part of a broader effort to find plants Europeans might find valuable for either commercial or ornamental purposes.²⁸ There is no indication in either Douglas' journal or in HBC sources that the company exercised any influence over Douglas' collection efforts; Douglas' orders clearly came from the Horticultural Society's office in London. Yet the role of the HBC was crucial. Without the logistical support of the HBC and the company's generally good relations with the native peoples of the region (thereby enabling Douglas to enlist native peoples to assist him when he needed it), Douglas' task would probably have been rendered too difficult for the Horticultural Society to send him on such an extensive journey. Hence, indirectly, the HBC as an imperial outpost of Britain served a particular scientific purpose in addition to its obvious commercial one.

During the voyage on the *William & Ann* to the Northwest Coast and for part of his time on land, John Scouler, a fellow Scot who served as the ship's surgeon upon the recommendation of naturalists John Richardson and William Jackson Hooker, accompanied Douglas. In his journal of the expedition, Scouler noted that the HBC wanted to "advance the knowledge of those extensive regions which are within the sphere of their commercial exertions," and thus were eager to have someone "who was

26. Elliott, 200-202. Douglas' journal was subsequently lost, and not published until it was found in 1914, long after Douglas could have received any profit from it.

27. Secondary accounts of Douglas' life and travels include William Morwood, *Traveler in a Vanished Landscape: The Life and Times of David Douglas* (New York: C.N. Potter, 1973), and Ann Lindsay Mitchell and Syd House, *David Douglas: Explorer and Botanist* (London: Aurum Press, 1999).

28. In addition to Brockway's work on the role of Kew Gardens mentioned previously, see Alfred Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport: Greenwood Press, 1972) for a broader analysis.

qualified to make collections in the various branches of natural history.”²⁹ While in the Pacific Northwest, Scouler went about doing so enthusiastically, joining Douglas in the vicinity of Fort Vancouver. During the summer of 1825, when Douglas traveled into the interior of the Columbia Department, Scouler traveled with the *William & Ann* up the Northwest Coast aiding in the ship’s reconnaissance mission.

Scouler made a number of observations about the lands and peoples of the coast. He noted, for instance, the abundance of salmon in the rivers and streams of the region, which provided sustenance for the inhabitants:

The most abundant supply of game in N. America is that afforded by the buffalo, and this animal has never penetrated to the N.W. Coast; at the same time, the Columbia River, Fraser’s River, and the other streams on the W. side of the Mountains, abound in salmon almost to their source. The inland tribes of the N.W. regions reside chiefly on the margins of the the rivers, where they live on salmon during the summer, and prepare greater quantities of the same fish for their winter supply. The produce of the chase is, therefore, with them a secondary consideration.³⁰

This sort of abundance, as Richard Mackie points out, led Scouler to make some conclusions regarding the culture of the indigenous people of the Northwest Coast:

It is, at least in part, owing to these peculiarities of their physical condition that the habits and social arrangements of the Indians on the opposite side of the mountains present such a remarkable contrast. The N.W. Indians, especially the coast-tribes, have made considerable progress in the rude arts of savage life. Their canoes are constructed with much skill; their houses, being for permanent residence, have been erected with some forethought and attention to comfort; and their fishing apparatus and articles of domestic economy are far more numerous and elaborate than can be found in the temporary lodges of hunting tribes. From this settled mode of life, they are more accustomed to continuous labour, and even show considerable aptitude for passing into an agricultural state...³¹

Scouler later published more observations on the peoples of the Northwest Coast in the *Journal of the Royal Geographical Society*, which, among other things, contained a discussion of indigenous languages and a list of words from those languages and their English equivalents.³²

Though it may not be possible to make a direct connection between Scouler’s work and HBC policies, it is clear from Scouler’s own words

29. John Scouler, “Account of a Voyage to Madeira, Brazil, Juan Fernandez, and the Gallipagos Islands, Performed in 1824 and 1825, with a View of Examining their Natural History, etc.,” *Edinburgh Journal of Science* 5, 10 (1826): 195.

30. Scouler, “Account of a Voyage to Madeira...,” quoted in Mackie, 76.

31. *Ibid.*, 76

32. John Scouler, “Observations on the Indigenous Tribes of the N.W. Coast of America,” *Journal of the Royal Geographical Society* 11 (1841): 215-250.

that the nature of his mission was somewhat different from that of Douglas, given that Scouler was directly employed by the HBC. The trade in beaver pelts continued to be at the core of the HBC's business in the Pacific Northwest, but the natural abundance of the region afforded new opportunities for profit.³³ Scouler's observations, and the similar observations of others, likely had some impact in guiding HBC plans to diversify its operations in the Northwest. Scouler's work was fairly typical of natural history in this period and was published in the appropriate journals; what makes his work important for our understanding of the connections between science and imperialism is that he acted as an agent of the HBC. Anything that could help bolster the HBC's business also had the effect of strengthening British imperial interests in the area, since the HBC was the specific vehicle of British imperialism there.

Yet another Scot, William Fraser Tolmie, served in the HBC along a trajectory similar to that of Scouler, though his service with the company lasted much longer. Tolmie arrived in the Pacific Northwest in 1833 and was associated with the operation of a settlement—he served as the physician at Fort Vancouver, and then became chief trader at Fort Nisqually. Born in Inverness, Scotland in 1812, Tolmie attended medical school at the University of Glasgow from 1829-31. With the support of William Jackson Hooker, then chair of botany at Glasgow University and later director of Kew Botanical Gardens, Tolmie was hired by the HBC in September 1832 to serve in the dual capacity of clerk and surgeon in the Columbia Department. In the years 1833-1840, Tolmie spent time at Fort Nisqually, Fort McLoughlin, and Fort Vancouver. Tolmie returned to Fort Nisqually, acting as a trader, a physician, and manager of the HBC subsidiary, the Puget's Sound Agricultural Company. In 1855, Tolmie was promoted to chief trader of Fort Nisqually.

Tolmie's interests included botany, but they also extended to other topics, like zoology and livestock breeding. Furthermore, like Scouler, Tolmie made considerable observations of the native peoples of the region. This was a lifelong effort; in 1884, two years before his death, he compiled and published with the eminent Canadian geologist and anthropologist George Mercer Dawson *The Comparative Vocabularies of the Indian Tribes of British Columbia*. This collaboration between Tolmie and Dawson, who was among the most prominent Canadian scientists of the time, demonstrates the scientific value of Tolmie's experience as an HBC employee to Dawson's pioneering research on the native peoples of British Columbia. Tolmie also became a political figure in the nascent colony of Vancouver Island, after arriving there in 1859 to manage the

33. Mackie, 218-243.

Puget's Sound Agricultural Company as he did at Nisqually. In 1860, he was elected to the House of Assembly of Vancouver Island as member for Victoria, a position he held until Vancouver was annexed by the mainland colony of British Columbia in 1866.³⁴ Tolmie's skills as a trader, manager, and agriculturalist permitted him to rise through the ranks of the HBC, eventually holding such positions as chief factor at Nisqually and manager of the Puget's Sound Agricultural Company at both Nisqually and Victoria.

This reflects the significance of the systematic understanding of natural commodities, their abundance and value, as gauged by the work of the naturalists. George Simpson, the company's head in North America, was acutely aware of the activities of the naturalists working in his company's territory. Tolmie reveals this in a letter to Simpson in March 1840, upon receiving permission to return to Britain in 1841:

I am glad to learn that the seeds I had the pleasure of sending you arrived in good order. Seeds however carefully packed are often injured by the vicissitudes of temperature to which they are exposed on the passage to England by sea. To avoid this risk I now send a few packets by the overland route [probably the Fort Vancouver–York Factory express]. One of these is to your address, and contains some seeds of the gigantic Umpqua Pine which is as yet I believe in possession of but few in Britain. I have ascertained the soundness of the Pine Seeds by sowing a (few) in the garden here.³⁵

Shortly after Tolmie had arrived in the Columbia Department in 1833, he remarked in his journal some interactions he had with the chief factor of the Columbia Department, John McLoughlin that included some exchanges of natural history knowledge:

In traversing pine wood [outside of Ft. Vancouver], the Govr. [John McLoughlin] pointed out to me a tall slender tree having a profusion of large syngenesious flowers called here Devil's Wood. Having being informed that the root was employed in the U.S. for the cure of the Intermittents, Mr. McL. used it here last season in doses of 3 ½ drms. of dried root in powder & succeeded in subduing diseases without cinchona &c.³⁶

34. Tolmie's life and career are discussed in W. Kaye Lamb, "William Fraser Tolmie," *Dictionary of Canadian Biography Online* <http://www.biographi.ca> (accessed 15th May 2007).

35. William Fraser Tolmie, *The Journals of William Fraser Tolmie, Physician and Fur Trader* (Vancouver: Mitchell Press Ltd., 1963), 334. It is not clear from the letter if the seeds were intended for Simpson's personal use, though Tolmie's index of his correspondence for that month indicated he wrote to William J. Hooker, who became the director of the Royal Botanic Gardens at Kew soon after, so it is possible these seeds were also passed along to Hooker and ended up at Kew.

36. *Ibid.*, 171.

This exchange went in both directions, as Tolmie indicated in a later entry, just before his departure for the site upon which Fort Nisqually and the accompanying farm were to be built:

Gave Dr. McL. the acacia seeds got at Oahu & also the drinking calabash. Finished copying the bill of lading begun yesterday. Took a last look at Dahila bed—the plants are nearly an inch high & numerous.³⁷

During his travel to the Nisqually site in May 1833, Tolmie wrote of one of the HBC's economic interests in the area and apparently lent his own knowledge and skills to understanding this further:

Embarked at 6 ½ A.M. & with considerable exertion on the part of boatmen reached the second 'Coal Mine' about nine...Having landed, explored bank for some extent around Coal [River], lighted fire on a narrow, sandy flat above & there breakfasted...again examined bank...another thin layer of brownish clay mistaken at a distance for carboligneous matter...a thick layer of grey porous stone or sand agglutinated together by clay, then the continuation of coal stratum...³⁸

As Tolmie neared his destination, he assessed the land with an eye for one of the objectives in building Fort Nisqually:

The soil of prairie seemed fertile, it was covered with a luxuriant, but not rank grass, & adorned with a much greater variety of flowers than either Cattlepootle or Jolifie plains, & much fewer trees, only single rows in some spots. Found ripe strawberries, on a sunny brae with an eastern exposure.³⁹

After arriving at Nisqually, Tolmie continued his observations, and took an active part in establishing the farm:

Both meadows [on either bank of the Nisqually River] are possessed of a fertile soil & would afford subsistence to a large herd of cattle.

Afterwards we mounted the north bank of Coe [River] by the path & were occupied nearly all day in collecting specimens of the soil at every hundred yards length from the summit of bank to the ploughed land.

...[I]n the afternoon, have been writing report of examination of Coe & arranging samples of soil.⁴⁰

These examples suggest some of the ways in which the HBC's patronage contributed to an environment that shaped the interests and practices of natural history in the region. There existed a number of institutions that formed an "imperial" science network: the Royal Navy, Kew Botanical Gardens, etc. The HBC was another one of these

37. Tolmie, 180.

38. *Ibid.*, 188.

39. *Ibid.*, 190.

40. *Ibid.*, 199. Tolmie writes nothing further about what he did with the soil, but his mention of a report suggests the samples were collected for analysis.

institutions, adding on yet another layer of imperial science. The HBC's participation in imperial science not only encompassed hosting and supporting naturalists working in its territories, as in the case of Douglas, but also, in the case of Tolmie and Scouler, included employing natural historical knowledge to further its own particular goals that at the same time sustained imperialism in North America. The HBC was first and foremost a mercantile enterprise; Tolmie in particular, as an employee of the HBC, was more explicitly guided toward acquiring knowledge of natural history of direct benefit to the company.

In another, more general, example, the HBC pursued a policy of creating 'fur deserts' to discourage competition from American interests coming from the east. While this policy has attracted the attention of fur-trade historians, it also should be seen as an episode in the history of science as practiced under HBC patronage. The HBC had long experience with dealing with the vicissitudes of beaver populations, both from the observations of its employees and those of native peoples (a critical and understudied source of natural knowledge). As geographer Arthur Ray has demonstrated, in areas in which the HBC's monopoly was contested, the company eliminated beaver populations to discourage competition.⁴¹ With that knowledge in mind, and with the understanding that certain fur territories, such as New Caledonia in the interior of British Columbia, brought more and better quality furs than others, the HBC decided to create a kind of buffer zone in the Snake River valley. The HBC endeavored to—and effectively did—extinguish beaver populations in the Snake Country through extensive trapping. By doing so, the HBC hoped that American trappers would find no profit there and would not push farther west and north, thus keeping New Caledonia and its pelts in the hands of the HBC, where beaver could be managed to maintain a steadily profitable yield of furs.

Fur "desertification" was an ambitious, if destructive, project that required systematic effort over the course of nearly twenty years, from 1823 to 1841. The main tactic behind the strategy was simple: HBC trapping parties were to find and trap every beaver they could find. Trapping parties set out from nearby posts (such as Fort Nez Perces near Walla Walla) in the fall and returned in the early spring in time to put the furs on the annual ship to London. The policy required good knowledge of beaver ecology. Trappers needed to know the signs of nearby beaver (such as dams and lodges), where best to find beaver lodges (streams, particularly slow-moving ones with dense woods near by), and how to

41. Arthur J. Ray, "Some Conservation Schemes of the Hudson's Bay Company, 1821-50: An Examination of the Problems of Resource Management in the Fur Trade," *Journal of Historical Geography* 1, 1 (1975): 49-68.

attract beavers to traps (usually through the use of castoreum, a substance secreted by glands of beaver and whose scent attracts them). This “applied” knowledge of the natural history of the beaver helped the Snake River parties considerably. In the first year of the policy, the HBC trapping party recorded 4,500 beaver caught; the trapping expedition of 1830-31 recorded none.⁴²

The significance of the fur desert policy is best understood in the context of the dispute between Britain and the United States over the ultimate disposition of the Pacific Northwest. The agreement of 1818, which left the region open to both British and American citizens, meant that American traders would quickly move in. Once the HBC moved west of the Rockies after its 1821 merger with the NWC, the company knew that American competitors posed a challenge and that since political means were not available to keep them out, the HBC would have to find a way to discourage the entry of Americans into the territory. Fur desertification in the Snake Country—aided by an understanding of the natural history of the beaver—appeared to be a viable strategy for both long-term profit (by protecting the HBC’s valuable beaver lands in New Caledonia) as well as short-term profit from the massive harvests of beaver pelts. This would, ideally, help maintain the HBC’s financial health, and by extension, British influence over the whole of the Pacific Northwest.

HBC employees also took advantage of their travels in the Snake Country to do natural history work of the more mundane sort. William Jackson Hooker and George Walker-Arnott, in a supplement to their book on the botany of Royal Navy Captain F.W. Beechey, noted that one of the collections they received came from “a friend of Mr. Tolmie,” a trapper who was operating in the Snake Country in the summer of 1837. This trapper was the HBC employee John McLeod, who had likely received some training from the American naturalist John Kirk Townsend, himself having been trained by Thomas Nuttall. Hooker and Walker-Arnott reported that the specimens sent by McLeod were “in beautiful preservation.” Once again, another remote area of North America lay within the reach of British science due to the willing assistance of the HBC and its trading infrastructure, even while the HBC was in the midst of a sustained campaign of ecological warfare against American trappers.⁴³

42. Jennifer Ott, “Ruining’ the Rivers in the Snake Country: The Hudson’s Bay Company’s Fur Desert Policy,” *Oregon Historical Quarterly* 104, 2 (2003): 166-195, also available online, <http://www.historycooperative.org/journals/ohq/104.2/ott.html> (accessed 15th Sept. 2008), pars 9, 31-35; David Wishart, *The Fur Trade of the American West, 1807-1840: A Geographical Synthesis* (Lincoln: University of Nebraska Press, 1979), 27-28.

43. Susan Delano McKelvey, *Botanical Exploration of the Trans-Mississippi West, 1790-1850* (Jamaica Plain, MA: The Arnold Arboretum of Harvard University, 1955), 627.

This kind of account shows the latent potential of much of the fur-trade history for historians of science, particularly those interested in the relationships between science and empire. The HBC's far-flung domains were outposts of the British Empire, and served as sites for the collection and distribution of natural knowledge that formed the network established by British naturalists and dependent upon the expansion and maintenance of British influence throughout the world. In the case of the Pacific Northwest, British interests were mostly economic and British imperial institutions had a mercantile bent. Natural knowledge of a general nature was useful to organizations like the HBC that profited from extractive activities like trapping, logging, and fishing. Employees such as Scouler and Tolmie, while not primarily devoted to natural history in their time with the HBC, nonetheless offered expertise that was of use to the company. Furthermore, their connections (as well as Douglas') to a larger natural history community made their access to new plants and animals valuable, access that was facilitated by the HBC.

Future work in this general area might extend its domain thematically in a couple of directions: for one, working consciously to draw together the history of science, empire, and environment; and second, to reconsider mercantile institutions as well as military ones in providing a framework for imperial sciences. Historians tend to think of the military first when discussing the impacts of European imperialism on European's scientific practices. But just as historians of the fur trade have identified the HBC as an imperial factor, we might better understand the history of science in its regional context if we see the HBC as a scientific factor as well.