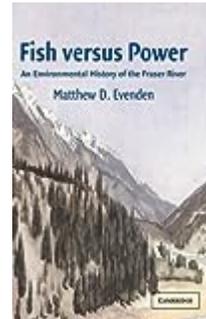




Matthew D. Evenden. *Fish versus Power: An Environmental History of the Fraser River.* New York: Cambridge University Press, 2004. xvii + 309 pp. \$65.00 (cloth), ISBN 978-0-521-83099-7.



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Saving the Fraser River: A Shifting Dynamic between Culture and Nature

The study of rivers, fisheries, and dams has gained deserved popularity in recent years in the academic market with books like *Making Salmon and Salmon without Rivers* as well as in trade presses with *Watershed: The Undamming of America*. With *Fish versus Power: An Environmental History of the Fraser River*, Matthew D. Evenden, a member of the Department of Geography at the University of British Columbia, has provided a fascinating new study that looks at all of these issues on a river that remains undammed, the famous and productive Fraser River of British Columbia.

The author notes early and reiterates throughout the book a central point concerning the nature of the Fraser River and the cultures that use and value it: the river is defined and remade by the cultures which surround and use the river. This is pivotal to understanding the history of the river and the changes it has undergone. It is fortunate for the river's fisheries, and for us, that by the time damming the river became a serious possibility, salmon had gained cultural value in British Columbian society and were granted protection in the Fraser River.

While the introduction sets up the basic contours of

the story, detailing the geography of the river's watershed, its natural history, and early native peoples' use of the river, Evenden also situates his work within the body of environmental history scholarship. Two points he emphasizes are the role of his book in continuing a methodology of trans-national environmental history and also the connection between science and environmental change. Evenden accurately locates his work within a tradition that includes Joseph Taylor's *Making Salmon* and Nancy Langston's *Forest Dreams, Forest Nightmares*. He should extend this lineage back and recognize the importance of other works that examine the relationship between science and environmental change such as Arthur McEvoy's *The Fisherman's Problem* and Paul Hirt's *The Conspiracy of Optimism*. There is a long and productive tradition examining the role of science in environmental change, and Evenden's book makes an important contribution to this important arena of study.

Ironically, this history of the Fraser River, a river which remains undammed, begins with its near-damming due to landslides. The landslides were a result of destabilization of river banks caused by railroad con-

struction. A series of slides between 1911 and 1913 nearly completely dammed the river by 1913, the same year as a big run of sockeye salmon. A major crisis emerged as spawning salmon piled up behind the debris dam, unable to navigate the narrow, strong current to finish the journey to their spawning grounds. This led to heroic efforts to clear a path for the salmon, which were an important economic resource for both Indians and commercial fisherman.

The early fisheries crisis led to scientific investigations of the river and salmon that, as Evenden points out, reveal the biased and flawed science of that period. The first fundamental problem was the deliberate ignoring of the native peoples' knowledge about fisheries and leaving the natives out of the discussion, reflecting a general marginalization of Indians' access to fisheries during this period.

"Remaking Hell's Gate," the third chapter in the book, provides the reader with a brief history of Pacific salmon fisheries science on the river in the 1930s and 1940s as efforts were made to evaluate the river and try to restore its salmon. This is a particularly fascinating study of early Pacific salmon fisheries science and the attempted application of ideal scientific scenarios without thorough understanding of other issues. With serious scientific investigation of the Fraser River sockeye salmon underway, an unanticipated problem arose for fisheries scientist William Thompson and his colleagues. By attaching tags to sockeye smolts, they hoped to collect returning salmon and gain knowledge about migration routes and upstream travel. As Evenden points out, this was a scientific experiment that ignored many elements, including the human element, specifically, the Indians who were collecting the fish and tags. Ideally, Indians that harvested fish with tags would forthwith present the tags, at a price of \$.50 each, to collection agents thereby providing immediate and geographically linked knowledge about the salmon. This is not what happened. Indian fishers on the Fraser instead employed the tags as currency, using them in stores to purchase goods, the storeowners and collection agents paying a lower price than the \$.50, collecting them, and then presenting them for full price and a profit. The emergence of middlemen and a tag-based economy undermined the scientific process. Furthermore, the tags, which were white with a red dot, were readily identifiable to fishermen with sharp eyes and led to the overharvesting of tagged fish, thus polluting the purity of the scientific approach even more.

According to Evenden, Thompson's studies con-

cluded that habitat destruction represented the primary problem for Fraser River salmon and fishways were constructed through Hells Gate with support from University of Washington engineers and fisheries experts experienced with fishway construction on Columbia River dams. But, as Evenden points out, a conflict arose when one of the former members of the study critiqued Thompson's conclusions, arguing that, in fact, there were flaws in the tagging studies and that overfishing of salmon needed to be considered more seriously. This conflict bore ramifications for the fisheries field in Canada as well as Pacific fisheries overall.

The Fraser River remained undammed over the next forty years while the rivers around it were harnessed for human industrial needs. As Evenden points out, the late nineteenth and early twentieth century was an era of remarkable expansion of the development of hydroelectric capabilities in the Northwest, both in the United States and in British Columbia. The mountainous region with its multitudinous rivers rushing to the sea seemed particularly hospitable to industrial development through hydroelectric production. All that was necessary were dams, turbines, transmission lines, and investment. The author effectively describes the development of power in the region, rendering a fairly difficult subject understandable, describing the tension between private and public power interests as well as the growing demands for power in the region as Vancouver grew and the economy industrialized.

The difficulties of damming the Fraser River in the early part of the twentieth century protected it while other regional rivers or their tributaries were harnessed for hydroelectricity. Over the course of time and with scientific investigation and a growing awareness of the impact of dams, British Columbia residents and fisheries experts gained the willingness and capacity to fight development on the Fraser in order to protect its salmon. Following World War II, the ability to defend the river and its fisheries were severely tested as serious measures were forwarded for damming the Fraser River. Evenden does a nice job of rendering a complex story of multiple and overlapping values, political interests, and economic arguments supporting and opposing the damming of the Fraser River with the concomitant destruction, or at least, damaging of the salmon fisheries. This is not a simple tale of environmentalists versus developers but rather a battlefield where the river was constantly defined and redefined in accordance with dam supporters' and opponents' values and rhetorical strategies. Dams were defined by supporters as key to industrial development and symbols

and tools of progress that would sweep away sentimental and archaic views of the river. Opponents of damming the river employed multiple arguments, including, for example, the importance of salmon for the commercial fishery. This was an old argument, and other arguments revealing other values emerged during this conflict. Supporters of the river and its fisheries saw the wild river and its healthy salmon runs as a link to the historical past and a symbol of regional identity. The salmon was heavily anthropomorphized in cartoons to create empathy for the fish and the barriers they would face in a dammed Fraser. Effective arguments were made for salmon as a necessary food resource, an argument that opponents to the Lower Snake River Dams in Washington State employed in their losing effort in the 1940s and 1950s, and that hydroelectrical power may be a temporary resource or one that could be surpassed by the nascent nuclear power industry. Matthew Evenden employs these examples to demonstrate the nature of the conflict over the future of the river and that the Fraser was and is defined not only by its geographic reality but by the values and ideas imposed on the river.

Returning to fisheries science in chapter seven, Evenden demonstrates ways in which Pacific salmon fisheries science developed differently in British Columbia than in the United States. American fisheries scientists, unable to prevent the construction of mainstem dams on the Columbia and Snake Rivers had developed an applied scientific approach. Furthermore, a continued commitment to hatcheries in the American Pacific Northwest, unlike in British Columbia, skewed much fisheries science in the direction of improving hatcheries' efficacy and production. Fisheries science in British Columbia instead developed strong cooperative, inter-agency efforts to include limited cross-border efforts and was more flexible in its approach to fisheries science. Evenden is careful not to overstate the differences between British Columbian and American Pacific Northwest fisheries science as pure science versus applied science but the impression is of a more comprehensive, holistic approach to fisheries science in British Columbia than in the American Pacific Northwest as fisheries scientists and agencies scrambled to preserve quickly declining fish runs.

The increasing expertise, clout, and respect for fish biologists in British Columbia made them important figures in debates over fish versus power. While demonstrating an open-mindedness for wacky ideas for down-

stream fish passage, for example, they held the line on techno-optimistic measures that would have cleared the way for dam construction on the Fraser River; in fact, there was no legitimate scientific basis for building dams and maintaining salmon runs. Finally, in 1997, the provincial government passed a law forbidding construction of a mainstem dam on the Fraser River. While cultural values are in constant flux and the meaning of the river can change accordingly, it seems that the Fraser and its fish are protected, for the time being.

The author's prose is effective and clear overall. While dealing with complex topics such as fisheries science and hydroelectric development, Evenden writes cogently. The fact that he clearly summarizes his key points at the end of the chapter is helpful to the reader; this is a user-friendly method of reminding the reader of the key points from that section as well as providing a final emphasis of what is most important. Busy readers will find these sections useful for gleaning important information from this book but will be doing themselves a disservice by missing a great deal of a very interesting study if that is all they read.

The amount and range of sources employed in this study are impressive. He situates his study carefully within the historiographies of dams and development, fisheries science, development of hydroelectrical power, and regional histories. Beyond a strong use and understanding of secondary works, Evenden has conducted research in collected papers in the British Columbia Archives and Records Service, the City of Vancouver Archives, the National Archives of Canada, the University of British Columbia Special Collections and Archives and the University of Washington Archives, among many others.

The most obvious audience for this study is those working in the fields of environmental history and geography. But I would encourage others outside these fields to read this book. It provides an important contribution to a regional history of western Canada and the Pacific Northwest. Moreover, as a history of fisheries research and policy development, hydroelectric production and the defense of fisheries, this book offers something for many readers with different interests. Finally, this is a story that explores the ongoing and constantly shifting dynamic between culture and nature, and therefore provides lessons for all of us.

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