

shoot an animal until they were sure to get off a good shot, and who did not hunt to 'fill their pots'. This meant therefore that bad hunters were the opposite and their characteristics were usually ascribed to First Nations and other subsistence hunters.

Finally, both authors devote some time to discussing wild places and how they came to be preserved. Sandlos discusses the creation of Wood Buffalo National Park and its use as an abattoir for surplus and diseased buffalo, and Loo examines the individual efforts of Tommy Walker and Andy Russell to set aside areas within the Rocky Mountains. These men believed that living in 'pristine' areas allowed people to live ethically, that is, in unity with the natural order. For those interested in the history of conservation, wildlife management, First Nations, state power and individual agency, Sandlos and Loo offer insightful analyses within provocative narrative frameworks. As a result, both books make a significant contribution to the literature on conservation in Canada and both books are enjoyable to read.

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Jamie Benidickson, *The Culture of Flushing: A Social and Legal History of Sewage* (Vancouver: University of British Columbia Press, 2007).

It is difficult to imagine this book being published twenty or 30 years ago. In the 1970s and 1980s neither the secondary literature, which it expertly summarizes and interprets, nor the world waste and water crisis by which it is ideologically and conceptually underwritten, had come fully and visibly into being. Benidickson's book is described as a social and legal history. But it is more than that. An excellent interim overview of the historiography of water and waste, *The Culture of Flushing* draws on a wide range of specialist publications. Information from this body of literature is intermixed with findings based on original research into Canadian, American, British and, on a more limited scale, European sources. The somewhat recondite term "flushing" may reduce potential readership. Firmly and authentically rooted in nineteenth—and much earlier—discourses and experience, it will fail to resonate with those struggling against pollution problems in twenty-first-century Lagos or Rio and near-critical drought conditions in the mightily affluent south-eastern United States. Something along the lines of 'water and waste, then and now' might have made better marketing sense.

Over the last two decades historians concerned with the origins and development of large-scale water supply, sewage disposal and treatment systems have intensively explored what Joel Tarr has classically described as the search for an "ultimate sink". Throughout the nineteenth and on into the twentieth century rapidly expanding urban communities in Europe and the United States urgently—

at times desperately – sought scientific, technical and infrastructural means to prevent their populations becoming befouled and infected by human waste (and noxious industrial effluent). The aim was to reduce pollution of living space, streams, wells and rivers.

Many researchers have concentrated on the dramatic and decimating impact of pandemic cholera between the 1830s and the 1890s. However, the demographic and epidemiological data now point in a different direction. Benidickson avoids the cholera obsession but says too little in specific terms about other diseases of the fecal-oral route. Then, as now in the developing world, water-transmitted and -associated gastroenteritic infection daily wrought havoc among infants and toddlers and classic ‘autumn fevers’—typhoid and paratyphoid—accounted for vastly larger numbers of adult deaths than the pandemic diseases. The fact that this basic epidemiological fact has not been incorporated into the *lingua franca* of scholarly debate confirms that during the last twenty years a disabling gulf has separated research undertaken by rapidly expanding numbers of urban-environmental historians in the United States (and, more recently, in Europe) and historical demographers and epidemiologists concerned with tracing patterns of cause-specific mortality. The former have focused on the insoluble scientific, technical and spatial problems that militated against the discovery of the chimerical “ultimate sink”. The latter have interrogated the fine detail of death and, latterly also, morbidity. At the same time, and with notable exceptions, both sub-disciplines have concentrated on macro-environmental and macro-demographic variables at the expense of fine-grained analysis of micro- infrastructural and micro-epidemiological change. Benidickson’s interim synthesis clearly reflects these historiographical facts of life.

The author’s close reading of primary documentation and an expanding body of historical-legal literature allows him to gauge the extent to which pollution problems during the modern period have generated and exacerbated exceptionally complex inter-urban and inter-communal conflict. One town’s waste became another town’s liquid poison. At the same time, the death of cattle from water-transmitted disease reinforced long-imbedded animosity between country and city. This is well illustrated through a detailed reconstruction of battles between Birmingham—industrializing Britain’s “second city”—and its rural hinterland in the mid-nineteenth century and the small town of Tamworth fifty years later (129-132, 238-242).

A major strength of this study is its refusal to draw too sharp a distinction between events, processes and dilemmas in the nineteenth, twentieth and early twenty-first centuries. Many pollution problems which scarred the period between the 1830s and 1900—uneven scientific and infrastructural development, local and regional conflict over riparian rights, disputes about the epidemiological implications of consuming what was intuited to be marginally impure water—repeatedly and subtly modified and transformed themselves until the 1930s and beyond. If

the final section of the book appears to be over-dominated by macro-political administrative and organizational detail, this is because many of the old ‘flushing’ problems remain unsolved and new means of dealing with them have been heavily dependent on interregional bureaucratic negotiation. At the same time, new developments—centrally and unavoidably, the water implications of global climate change—have generated wholly new sets of dilemmas. Only when the latter are transnationally confronted on a range of interrelated fronts, will the spectre of multiple world water—and waste—crisis begin to loom less large.

Anyone who has dipped a toe into the murky complexities of the history of sewage can have nothing but admiration for the clarity with which Benidickson has tackled his multifaceted themes. *The Culture of Flushing* deserves a supporting place on the same shelf as Martin V. Melosi’s *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present* (2000).

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Stephen Pyne, *Awful Splendour: A Fire History of Canada* (Vancouver: University of British Columbia Press, 2008).

There are few scholars who dominate a field as Stephen Pyne does with the history of fire. Since the publication of his classic *Fire in America: A Cultural History of Wildland and Rural Fire* in 1982, Pyne has published over a half-dozen books on fire in world environmental history. In all his works, he puts fire at the centre of his narrative and retells familiar tales of European expansion and American history with wildland fire as his conceptual tool. Now he has done the same for Canada in *Awful Splendour*. The volume shows the importance of fire in the country’s history, but it also exposes some of the shortcomings of his approach.

Like other world environmental historians, Pyne covers large swaths of time and space in his narrative. *Awful Splendour* begins with the melting of the Pleistocene ice sheets and the return of vegetation to the northern half of the continent. With forests and grasslands came combustion. Such cycles of fire and ice had occurred throughout the Pleistocene, but this time the revegetation of what became Canada was accompanied by the arrival of humans who burned the landscape. In early chapters, Pyne offers an exhaustive survey of the fire regimes of indigenous Canada. While necessary, this section does get bogged down from the litany of fire and vegetation characteristics of tundra, boreal forests, and other ecosystems.

The narrative pace quickens in the two central sections of the book “Axe” and “Engine.” In “Axe”, Pyne shows the role of fire as a tool and byproduct of colonization. Settlers used fire to clear land for farms and burn slash from logging. Colonization left no shortage of combustible materials in its wake, and