

Robert Legget, *Ottawa River Canals*

ROBERT W. PASSFIELD

Robert Legget. *Ottawa River Canals and the Defence of British North America*. Toronto: University of Toronto Press, 1988. 308 pp., ill. Cloth \$35.00, ISBN 0-8020-5794-2.

Robert Legget's *Ottawa River Canals* is a popular history that will appeal to canal enthusiasts and readers interested in Canadian engineering. Academics will find the book of lesser interest owing to its anecdotal tone and lack of any sustained thesis. The author's stated aim is to tell "the full story of the Ottawa River canals" within "its proper historical perspective." He sees the canals as significant both militarily, as part of the vital interior Ottawa-Rideau transport system on which the defence of British North America rested, and in Canadian engineering history, being "Canada's first major public works."

The first chapter, a prologue, summarizes critical events of the Napoleonic Wars, the causes of the War of 1812 and military transport problems on the St. Lawrence River. A second chapter describes the geography of the projected Ottawa-Rideau route, early surveys and explorations, existing modes of river transport and the beginnings of settlement, and introduces the Royal Staff Corps. Readers interested in further information on the Rideau Canal are then referred to the author's related work, *Rideau Waterway* (1955).

Subsequent chapters focus on the construction and operation of the Ottawa canals, and their successors through to 1963. Of the three original military canals, the Grenville Canal, built (1819-31) by the Royal Staff Corps under Captain Henry DuVernet, is well treated, but the Chute à Blondeau (1829-33) and Carillon (1830-33) canals, built by contractors under Royal Staff Corps supervision, receive a sketchy treatment. Included is a brief account of the Ste.-Anne-de-Bellevue Canal built (1841-43) by the Canadian Board of Works at the confluence of the Ottawa and St. Lawrence rivers. The operations of the military canals under the British Army Ordnance Department (1834-56) and Canadian control (1856-1963) is commented on, as well as the canal enlargements of the 1870s and 1880s and the Hydro-Québec dam and high-lift lock erected at Carillon (1959-63), flooding out the earlier canals.

An epilogue describes the few canal remnants, provides directions to each site and elaborates on the significance of the Ottawa

canals as "public works." First-rate maps and a judicious selection of historical photographs augment the text. Appendices provide a brief history of the little-known Royal Staff Corps, a listing of its canal project personnel, annual canal traffic statistics and a brief history of the related, but abortive, Georgian Bay Ship Canal project.

This is a highly readable book, a chronological narrative enlivened with vivid description, anecdotes and travellers' comments. It yields a good history of the canals' construction, but less so of their commercial operation. There is surprisingly little technical detail other than on rock excavation methods.

The author laments, and rightly so, the dearth of primary source material on the original Ottawa military canals, and makes full use of the major source, RG8, Series C, British Army and Naval Records. But for the subsequent period, a great deal of material has been ignored: viz. RG 11, Public Works, for the 1841-79 period; RG43, Railways and Canals, for the period after 1879; and the Annual Reports of DPW and DRC. Secondary research has been confined mostly to books and government reports, ignoring pertinent periodical literature. Moreover, there is little analysis of canal freight statistics or assessment of the Ottawa canals in the broader national canals system. As a result, one major significance of the Ottawa canals is missed. After mid-century, the Ottawa canals were an integral part of a major commercial canal network by which huge volumes of sawn lumber were barged from the Chaudière Falls mills, via the Ottawa, Lachine, Richelieu River and Erie canals, to the lumber markets of New York.

The claim that the Ottawa military canals are "Canada's first major public works" and "the place where modern Canadian civil engineering really began," is rather tenuous based solely on the 1819 project commencement date and dismissal of earlier smaller scale projects. Such a claim might better be made for the Lachine Canal, built (1821-24) by the province of Lower Canada for commercial purposes, whereas the Ottawa canals were a military project, built primarily for military purposes. The Lachine Canal engineers subsequently worked on other Canadian canal projects; the Royal Staff Corps engineers returned to Britain. Moreover, the Lachine Canal was all but completed when

lock masonry work commenced on the Ottawa military canals.

Although by no means "the full story" of the Ottawa canals, the author has produced

a worthwhile book contributing to our knowledge of the subject.

Suzanne Zellers, *Inventing Canada*

JAMES P. HULL

Suzanne Zellers. *Inventing Canada—Early Victorian Science and the Idea of a Transcontinental Nation*. University of Toronto Press: Toronto, 1987. vii + 356 pp., notes, ill., index. Cloth \$40.00, ISBN 0-8020-2644-3. Paper \$16.95, ISBN 0-8020-6606-2.

What do you do with your butterflies and minerals? What may displays of geological, floral and faunal specimens, and the instruments of their collection, be used to communicate? Often aesthetically pleasing, they may be shown almost for their own sake. They can illustrate some scientific or natural principle. A special local or biographical connection may be highlighted. But more than this is possible. These relics, using that term non-pejoratively, of nineteenth-century natural history and natural philosophy can allow us to transmit ideas about matters of fundamental importance to Canada's social, intellectual and cultural history.

Inventing Canada describes the scientific endeavours which, *inter alia*, gathered the specimens that became the nuclei of some of the earliest Canadian museum collections. The so-called inventory or survey sciences—geology, terrestrial magnetism and meteorology, and botany—were concerned first and foremost with data collection in the field. Utilitarian sciences, they surveyed, inventoried and charted the natural features, animate and inanimate, of British North America, with an eye to the economic development of these territories. For their success they depended on the cumulative observations of many field workers, which necessarily meant the reliance on the work of the amateur as well as the professional. To support these activities, some of Canada's earliest scientific institutions, both governmental and non-governmental, were founded.

Had Zeller done no more than give us summary accounts of these early Canadian scientific enterprises, which she has done and done well, her's would be a useful contribution. However, she has done much

more than this, for the importance of those enterprises was much greater. They played a significant part in the process of nation building and national development. Not only did they reveal and chart natural bounty, but in their geographical scope they embraced the whole of British North America. Science, with its transcontinental reach, was thus in advance of a national policy and, with the obvious exception of the fur trade, of a national economy. Zeller details how and why the interconnected business, political and intellectual elites of pre-Confederation Canada welcomed and supported these scientific efforts. Such a utilitarian science proved attractive to those practical-minded gentlemen, who saw in the creation of a new British nation in North America a solution to a host of immediate problems. Science played a valuable role in extending and replicating British society in North America quite apart from its economic ramifications.

Today we fancy that never before in history have people's lives been so affected by science and technology. We might equally say that never before has science and technology so little figured in the general culture of educated citizens. Victorian enthusiasm for, participation in and understanding of science and technology all far exceeded that of our own times. The vigorous voices of Victorian Canadians speak to these issues from the pages of *Inventing Canada*. A supporter of the Geological Survey of Canada, writing in the *Ottawa Citizen*, declares flatly, "without a Geological Survey, no Political Economist can direct the industry of Canada, or say what should or should not be done" (p. 93). A Toronto editor links science to one of the great social issues of his day, temperance, insisting "no temptation...could lure to the Tavern while the prize cauliflower, the giant asparagus, the huge gooseberry, the gay tulip, or fragrant carnation demanded attention" (p. 198). In what would become one