

of the most enduring images used by Canadian science boosters, science and commerce are said by one agricultural journal to have "gone hand in hand" (p. 241).

Inventing Canada is a work of solid and thoughtful scholarship. It, along with Ian Radforth's study of the mechanization of pulpwood logging in Ontario, *Bushworkers and Bosses*, was identified as especially meritorious by the Canadian Historical Association's Macdonald Prize Committee in 1988. That event may be seen in part as a recognition by the history profession in this country of the growing importance of the history of Canadian science and technology as well as the increasing quality of works in that field.

My complaints about this work are few. Overwhelmingly the attitudes to science that Zeller describes, the spokespersons she quotes, are from the elite of Victorian Canadian society. True, elites are, by definition, of especial import. However, this slights the extent of popular enthusiasm for science, which was by no means confined to one social class. In spite of its subtitle, this is a study of only some aspects of Victorian science in Canada. Even a brief discussion of the emerging industrial chemistry of the nineteenth century would only have strengthened

Zeller's arguments. Finally, once again, the University of Toronto Press has failed to understand that a short "Note on Sources" is an entirely inadequate substitute for a proper bibliography in a major scholarly work.

This book will obviously be of interest to specialists of the history of science. Doubtless it will long remain a basic study of pre-Confederation science. Professor Zeller has a fine literary style; anyone who enjoys good writing will read this book with pleasure. But this work will also be of particular interest to professionals in the heritage community. It provides more than just a great deal of information and insight into mid-nineteenth-century Canadian science. It offers a framework for seeing this part of our heritage in its proper and wider context. Science is a social activity; the products of science as well as its tools can illustrate and illuminate the nature of the society in which it is conducted. The portrait that Zeller offers of Victorian Canada is a skilful one, from an original perspective. Her ideas, insights and information are important and the sort that can and should be further illustrated and disseminated by the use of specimens and artifacts in the collections of almost every Canadian museum.

Stephen Gillis and John Gillis, *No Faster Than a Walk* Lyn and Richard Harrington, *Covered Bridges*

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Stephen Gillis and John Gillis. *No Faster Than a Walk*. Fredericton: Goose Lane Editions, 1988. 101 pp., 137 ill. Cloth \$24.95, ISBN 0-86492-091-1.

Lyn and Richard Harrington. *Covered Bridges of Central and Eastern Canada*. Toronto: McGraw-Hill Ryerson Ltd., 1976. 88 pp., 64 ill. Paper? \$6.95, ISBN 0-07-082406-1.

A pervasive popular symbol for New Brunswick folk life, the covered bridge can still be found in abundance. From the material culture point of view, these humble structures are called "vernacular objects" because they are used by all people in a community as part of common, everyday country life. John and Stephen Gillis in *No Faster Than a Walk*, their book about the covered bridges of New

Brunswick, call them "kissing bridges." The title of this work is derived from the sign nailed over the portal of the Cain Bridge, Kings County (not standing), which reads "Cain Bridge—1913. \$20 fine for driving faster than a walk on this bridge." The stated purpose of *No Faster Than a Walk* is "not to offer the last word on the subject but to try to capture the sentiments aroused" by the bridges. The intention of this review is to measure the book as a study in material history and the extent to which the subject merits scholarly interest and further thought, research and publication. An earlier work, *Covered Bridges* by Lyn and Richard Harrington, provides a basis for comparison.

Covered bridges were almost always built and maintained by public taxes. As public

utilities, they were utilitarian. A bridge could be built without a cover but that meant that it had to be cleared of snow in the winter and the wood could deteriorate quickly from exposure to the elements. Ironically, in order for horse and sleigh to pass over the bridge in winter, the covered bridge had to be "snowed." A few basic ideas underlay the spatial organization of the covered bridges. Symmetry was the rule. Barn-building techniques were perpetuated in the superstructure, while the side supports, undercarriage and floor were the domain of the engineers. Certain functional components were generally repeated. Variations occurred in length, height, presence of windows and walkways, weight tolerance and the treatment of roof and flooring. The portal was large enough to allow a loaded hay-wagon to pass through. There was some diversity in detail but a high degree of consistency prevailed. Nothing about the bridge suggests anything but functionality in its design. No conceit or embellishment was employed in construction.

After the turn of the century, covered bridges were made from strong, rot-resistant British Columbia Douglas fir after the turn of the century. New Brunswick's fabled white pine had by then gone to shipbuilding. Flooring was New Brunswick black spruce. Floorboards currently used are chemically treated maple or yellow birch. Hemlock formed angle blocks. Cedar shingles were originally the preferred roofing; at present they cost twice as much as metal sheeting. Very few bridges were painted. Most were allowed to weather to a venerable silver grey and thus harmonize with their natural setting.

Placement of a bridge was determined by the stream to be crossed, the community settlement pattern and the consequent development of roads. This is seen on a current New Brunswick Department of Highways map. According to *Covered Bridges* many bridges served pioneer mills. No early map is available to indicate whether urban sites at one time used covered bridges. The varied settings of the bridges were more distinguished than the plain bridges themselves. The Harringtons suggest this at the beginning of their book when they note that they studied the covered bridges in the springtime, but it would have been "fascinating to see then at other times" (p. vii). Milton Gregg in his foreword to *Covered Bridges* observes that most of the bridges were "found in villages, rural communities and in secluded wooded valleys, where streams run fresh and clear" (p. vi).

As they were made of wood, the average age

of a covered bridge is estimated to be 80 years. The earliest covered bridge now standing in New Brunswick is the Mill Brook No. 1 at Nelson Hollow, which dates from the 1870s. The latest built is the Quisibis No. 2 at Saint Anne, completed in 1951. Thus the bridges range in age from 119 to 38 years. According to the Harrisons, "the province required 10,000 highway bridges to cross its numerous lakes and rivers." New Brunswick has the greatest concentration of covered bridges in the world, as well as the longest one, the famous Hartland Bridge, 1282 feet (391 m) long, built for \$700 in 1899. In 1936 there were 320 covered bridges in the province. The Gillis book recorded 73 bridges as standing but in the past 10 months three more have been destroyed, two by fire and one by a heavy-equipment accident.

When a bridge ceases to be functional, its value to a community changes. Ordinarily, it is an integral part of a highway system; in the context of material history, it is an artifact and an exhibition. When no longer in use, the covered bridge is still an artifact, but it becomes an object akin to a monument; as a structure surviving from another period it keeps alive the memory of a bygone age. It is a symbol of the province's cultural and geographical uniqueness. The League for Rural Renewal, a defunct New Brunswick heritage organization, perceived covered bridges as such, often citing the Biblical quotation "Remove not thy ancient landmarks which thy fathers have set" (Proverbs, 22:28). A reviewer, David Oancia, describes surviving covered bridges as "picturesque monuments to a pioneering past" (*Telegraph Journal*, 10 December 1988).

Because of such sentiments and associations, covered bridges are also a potent symbol. Thus societies have been organized to rebuild and preserve them; photographers and writers are recording their existence with a sense of great urgency; and governments are forming policy regarding their upkeep. With respect to the last, the New Brunswick Department of Highways has adopted a policy providing for the repair and maintenance of existing covered bridges. In cases where traffic has become too frequent and loads too heavy, bridges are bypassed by new routes and left standing. Clearly, covered bridges belong to a past age and are disappearing, never to be built again. The Gillis brothers tell us that the remaining bridges (eight not in service) have an expected life span of only decades. The societies, the publications, and the government involvement are all responses to a wave of nostalgia for time past and the era in which the bridges were built.

It is an unbidden mythology that has bathed covered bridges with their romantic hues. Called "kissing bridges," the covered bridges were cast as lovers' lanes where amorous exploits of the young could be shielded from public gaze. Sensitive citizens even resisted building them as they felt covered bridges encouraged immoral behaviour. The Hartland Bridge, for example, was not always covered. A petition was even circulated opposing the plans to cover it because of the jeopardy it would pose to the morals of the young. Indeed, a cursory survey of bridge graffiti reveals a rich and graphically beautiful history of amorous couplings, complete with anatomically correct drawings, starchy loyalty and local humour.

The romantic image of the covered bridge is further perpetuated through the works of amateur and folk artists. The resulting paintings embody nostalgic mythologized images of rural life rather than act as reliable records of the actual structures. Such mythologies have reduced covered bridges to symbols of simpler, more innocent days, ignoring the crimes and violence to which the structures were occasionally witnesses.

Often the targets for arson and vandalism, the bridges were also sites for other disasters, such as the alleged incident of a drowning when the Upper Dorchester Bridge over the Memramcook River, Westmorland County, was swept away in the flood of 1917. Other incidents involving bodies floating beneath the bridges point to murder or suicide. The Harringtons admit, "In our nostalgia for the slower more serene way of life, we may well attribute exaggerated virtues to our forefathers."

Much of the aesthetic and social merit of covered bridges comes from their physical context. In *No Faster Than a Walk* this context is partially conveyed through John Gillis' fine photography. Interpreter as well as photographer, Gillis shows a respect for his subjects and their natural settings by taking horizontal shots. The horizontal design of *No Faster Than a Walk* echoes this sensitivity. The Harringtons' *Covered Bridges* has a vertical format that contradicts and works against the proportions of the bridges.

Neither book can be credited as being a work of material history. *No Faster Than a Walk* does not have headings, a table of contents or endnotes. It contains, however, an index and a bibliography, prepared at the insistence of the publisher. Written in a chatty anecdotal style *No Faster Than a Walk* lacks the structure and discipline of a more scholarly work. On the other hand, its many fine photo-

graphs are valuable documents. Indeed the volume is a coffee-table book in which even back matter serves to reproduce beautiful engineer's drawings. If the goal of the book is to celebrate a tradition, not to make a scholarly contribution, then the book fulfills its purpose.

Covered Bridges has even less to recommend it as a work of material history. Although it contains some original research, it lacks citations, making the facts difficult to check or follow-up. This is a loss to scholars, especially with respect to the community interviews, the sources and details of which survive only in the Harringtons' memories.

Another difficulty in using either volume as a research tool is the lack of a usable map or road instructions to locate the bridge sites mentioned in the books. *Covered Bridges* purports to give help finding the bridges by providing a road map and a list. In practice the task is arduous even with Department of Transportation maps and lists because obscure communities with local names and small streams go unmarked on maps and residents may have removed directional signs. For example, the town of Zealand has no marker indicating it. The sign on the Zealand Baptist Church is the only clue given a traveller. As well, some roads to covered bridges are not plowed in winter, such as the bridge at Nackawic Siding.

Each volume has conceptual weaknesses as well as technical shortcomings. Both books deal anecdotally with the attitudes of the communities, but neither examines them or their mythology with any serious intent or overriding thesis. The authors are merely telling entertaining stories. No thesis is drawn for the reader, no authoritative principles are forged from the material. Background information from the community is simply an array of viewpoints. The two books are tandem works, with *No Faster Than a Walk* more useful for material culture purposes. Now it remains for a serious historian to take the subject beyond the banal and sentimental. There is as pressing a need to regard the covered bridge as an artifact and an intellectual preserve, as there is a need to care for the covered bridge as a community landmark and provincial symbol. *No Faster Than Walk* provides a popular form of documentation that is an update of *Covered Bridges*, and it does "capture the sentiments aroused by them." Material historians will find ample opportunity to enlarge on site, social context, status, and the problem of transience, serious issues only lightly dealt with by *No Faster Than a Walk*.