

"references," including all the familiar secondary sources that a Great Lakes ship enthusiast could expect to have access to. Detailed documentation from primary sources is not furnished. Given the author's intended audience this is not surprising. But *The Ships of Collingwood* should not be dismissed out of hand by museum professionals or academic historians. The author serves an important function by reaching out to a wider public. In fact, in terms of sales, the academics find a niche market while it is Gillham and his compatriots who meet the demands of the larger consumer market.

The author is not merely a popularizer of more serious work — there are virtually no academic studies for him to draw on. In this and earlier publications Gillham has been in advance of historical scholarship. Perhaps little could be added to this catalogue of Collingwood's

production, except a few more detailed photographs of vessels under construction so readers would have an idea of how the ships were actually built. What needs to be done, however, is work by museum professionals and academics on virtually all aspects of twentieth-century Canadian Great Lakes shipping. Critical scholarship is notable by its absence. Aside from a few studies in labour history, some work on the Canadian canal at Sault Ste Marie, and a brief volume on the fishery, the field is deserted. Yet, there are ample resources available for more detailed interpretations of Canadian Great Lakes history and ethnology.

The author cannot be blamed for not providing an academic tome when his purpose was entirely different — an enjoyable photographic portrait of Collingwood built ships. It is up to the professional historians and curators to explore the subject in greater detail.

Robert B. Gordon and Patrick M. Malone, *The Texture of Industry: An Archaeological View of the Industrialization of North America*

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Gordon, Robert B., and Patrick M. Malone, *The Texture of Industry: An Archaeological View of the Industrialization of North America*, New York: Oxford University Press, 1994. 442 pp., 155 illus., cloth \$73.95, ISBN 0-19-505885-2.

This is a handsome example of a new species of industrial archaeological study, neither a sector-by-sector survey of industrial history, with some appended illustrations, nor a gazetteer of a particular region. It neither makes ought statements, nor is its prime purpose to set agendas for others. It is rather a distillation of the thinking of Gordon and Malone, and of others of the first generation of industrial archaeologists in the United States. Some of its arguments are remarkably similar to those being advanced independently by thinking industrial archaeologists in Great Britain.

The achievement of the Gordon/Malone generation in establishing Industrial Archaeology as a discipline in North America is displayed in the bibliography which lists some six hundred works, of which almost 70 per cent were published in the United States and Canada in the 30 years before 1994. Most of those of earlier date are not works of historical

scholarship, but technical handbooks or government statistical publications. The bibliography also reveals one of the book's weaknesses — its rather limited view of the development of the discipline outside the United States. Some eight per cent of the items in the bibliography were published in Great Britain, but some of these are technical handbooks rather than industrial archaeological studies, and only two items come from continental Europe. Even the claim that this is "an archaeological view of the industrialization of North America" might raise objections. Relatively few Canadian works in the English language are listed, McCullough on textiles (A. B. McCullough, *The Primary Textile Industry in Canada: History and Heritage*, Ottawa: Parks Service, 1992) being a notable omission, and no notice is taken of the considerable contribution to industrial archaeological scholarship that has been made by the Quebecois. To a European, Industrial Archaeology in the United States appears to have closer links with the history of technology than with the study of material culture. In consequence there are topics like housing and the analysis of cultural landscapes that would be part of the industrial archaeologist's agenda in

Britain, Germany or Sweden, which are less than fully covered. It seems curious, for example, to find no reference in the bibliography to any of Schlereth's works, not even to his study of US40 in Indiana (T. J. Schlereth, *US40: A Roadscape of the American Experience*, Indianapolis: Indiana Historical Society, 1985), which is the inspiration for all archaeologists who aspire to "read" routeways.

Nevertheless from a European perspective this is more than a useful guide to places of industrial archaeological interest in the United States. It opens insights into the discipline of Industrial Archaeology in the United States that reveal different structures from those which would appear in a parallel study in Europe. Industrial Archaeology in the United States has been strongly influenced by the scientific study of artifacts. For the European reader the book provides a stimulating introduction to the ways in which the detailed examination of lathes or axes has enlarged understanding of industrial processes, and of how metallurgical analysis can throw light on innovations in recent centuries. Investigation by replication has been developed further in the United States than in Europe, except perhaps for the innovative work undertaken in Bologna. Gordon and Malone provide guidance to what has been learned by this means about rendering whale blubber, the manufacture of "negro cloth" and the operation of bloomeries. Environmental issues are acutely observed. The analysis of industrial landscapes, whether of anthracite mining in northeast Pennsylvania, of lead-mining in Missouri or of gold-working in the Yukon is thorough and perceptive. The environmental legacies of such industries are described with a candour which is, as yet, unusual in industrial archaeological studies in Europe. The book says much that is stimulating about the study of industrial buildings, although much of the discussion of mining centres around what can be seen at show mines, and no comprehensive guidance is provided on the analysis of the component buildings of surface installations.

It is cheering for any industrial archaeologist to read that "Much of the evidence for the development of mechanical power transmission in the United States has come from the examination of discarded or in situ components." Yet the most significant feature of the approach taken by Gordon and Malone relates to context rather than to detailed methodology. The book breaks away decisively from the traditional sector-by-sector guide to the physical remains of the industrial past. The authors look

perceptively at the links between different forms of manufacture at particular periods. They argue with conviction that we learn more about an eighteenth-century, stone-built, water-powered, charcoal-fired blast furnace if we interpret it as a similar enterprise to a contemporary grist mill or saw mill, than if we see it primarily as an ancestor of a late twentieth-century furnace capable of smelting ten thousand tons of iron a day. Similarly there is much in common between *all* coal field industries of the nineteenth century. In discussion of power and of forms of construction the authors contribute much to our understanding by drawing on examples from a variety of sectors. The chapter on factory buildings progresses from Slater Mill to River Rouge and beyond, expanding our understanding as it does so.

A further strength of the book comes from the authors' awareness of the significance of archaeological evidence in approaching the history of work. Their stress on the role of "growing artisanal competence" or "incremented innovation" as a factor in technological development is a helpful contribution to the methodology of Industrial Archaeology, and they display a commendable awareness of the issues raised by such social historians as E. P. Thompson and Patrick Joyce.

Gordon and Malone advise (p. 33) that every student of American industrial history should hear in motion the eighty working looms at Boott Mill, Lowell, an acknowledgement that Industrial Archaeology in the United States has advanced through conservation projects as well as through scholarship. It is also a statement which is confident, a word which describes many aspects of the book. The authors see no need to apologize for their discipline, nor to make promises about what it may produce in the future. They simply accept that industrial archaeologists participate with other specialists in debates on the big questions about the history of the United States. The book's judgements are not just confident — they are mature. They rest, as the bibliography shows, on a substantial corpus of scholarship. This book opens new perspectives on the growth of manufacturing in the United States, is a contribution to thinking about Industrial Archaeology that is significant beyond North American shores and a challenge to succeeding generations. It is to be hoped that there will be as much that is enlightening and as much that is challenging in a future distillation of the work of industrial archaeologists published in the thirty years after 1994.