

Bacque's inability to deal with all the evidence is not the only problem with this book. The main argument in *Other Losses* first appeared in *Saturday Night*. The article was well written and the argument presented in a very tight manner. It appears that Bacque received better editing services for the article than for the book. The narrative in the book is not all in one direction. As his argument expands to fill the pages, it loses its organization and structure. One example of this is how Bacque deals with the question of the total number of "other losses." There is no clear and methodical attempt to deal with the numbers, and this leaves the reader frustrated and ploughing through numerous appendices in the hope of an answer, which can only be estimated as somewhere around a million.

That there is no conspiracy involved here does not diminish the tragic nature of these events, and Bacque's descriptions of individual acts of cruelty still stand as evidence of allied inhumanity. And there is no doubt of the need for more scholarly work on war's impact on individuals, rather than accounts of winners and losers. However, future endeavours should not follow the methods employed by Bacque.

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**The Field Naturalist: John Macoun, the Geological Survey, and Natural Science.** W.A. WAISER. Toronto: University of Toronto Press, 1989. x, 253 p. ISBN 0-8020-2686-9 \$30.00 (cloth).

William Waiser has produced a well-written and balanced account of one of Canada's most prominent field naturalists, John Macoun. This self-taught botanist was with the Geological Survey of Canada for some thirty years, serving first as Dominion Botanist and later as Survey Naturalist. During this period, he is credited with establishing a national herbarium which contained some 100,000 specimen sheets, of which at least one thousand were new to science. His collections remain important even to this day, not because they were among the first specimens collected for some parts of Canada, but because they were gathered before the natural environment was extensively disturbed. Eventually his work helped lay the foundation for the creation of the National Museum of Natural Sciences.

But Macoun's accomplishments were not without their costs, and it is at this level — the critical appraisal of Macoun's research — that Waiser's study is particularly revealing. Throughout his career, Macoun emphasized quantity over quality; many of his field collections were gathered in haste and without any attempt for systematic coverage. His collections were often improperly preserved and without adequate notations. More often than not, his flora record of Canada reflected his personal tastes rather than the needs of the national institution.

Unfortunately, Macoun's emphasis on collection was at the expense of other aspects of scientific study and, as a result, much of his research remained on the fringe of true scientific inquiry. While other natural scientists of the nineteenth century were specializing in the new field of biology, Macoun held strongly to his conviction that the best scientist was the all-round generalist. Macoun had the entire Canadian land mass at his disposal; other investigators would have seen the territory as a living laboratory in which to take up Darwin's challenge and to focus their studies on the anatomy and

physiology of organisms. Natural scientists elsewhere had given up much of their field activities "in favour of the laboratory, the microscope, and the experiment." (p. 9) Macoun went against this trend; his reputation was that of a collector, and it was a reputation which he personally took great pleasure in endorsing.

Interestingly, Macoun would not even classify his own specimens. Such tasks he handed to scientists in the United Kingdom and the United States. As Waiser points out, this practice meant that foreign scientists were organizing Canadian flora and fauna, despite the fact that the Geological Survey of Canada had a full-time botanist on staff. Although Macoun's interests may have been very limited, his fieldwork was exactly the kind of science which federal politicians of the day understood.

Waiser's critique is most effective when assessing the impact of Macoun's career on late nineteenth-century Canada. Perhaps more than any single individual, Macoun was responsible for creating the false impression that Canada's frontiers could be settled with relative ease. As a "self-righteous, outspoken, abstinent Conservative and an ardent imperialist" (p. 63), Macoun was sensitive to the federal government's aspirations in western Canada. It was easy for him to recognize that "Ottawa expected positive, practical information of immediate economic value. . ." (p. 204). He thought nothing of using his knowledge of Canada's natural life in order to portray Western Canada as a Garden of Eden. "He was convinced that the natural flora of a district indicated the character of the soil and climate and hence the suitability of the region for cultivation purposes" (p. 12) and was always more than willing to make pronouncements on the agricultural potential of an area, based solely on his own botanical surveys. Interestingly, these pronouncements were always very optimistic. For example, in one ten-year period, from 1872 to 1881, he made five expeditions through the Northwest Territories, and each time Macoun returned entirely convinced of the untold potential of the region. Whereas others warned of summer frost and insufficient moisture, Macoun saw gardens of plenty. He felt that it was his patriotic duty to reveal the country's potential. Of course, if his optimistic assessments of the nation brought attention and further funding for his work, so much the better. One cannot help but question many of Macoun's motives. He was a staunch Conservative and wanted to serve the best interests of his government, but expected rewards in return. A significant part of *The Field Naturalist* is devoted to showing how Macoun manipulated "the system" to ensure his own security.

*The Field Naturalist* is definitely a success. The book is an excellent companion to other discussions concerning Canadian perceptions of the Northwest, such as Owsram's *Promise of Eden* and Warkentin's *Western Interior of Canada*. It is also a worthwhile addition to the small but growing body of studies which examine the complex interplay between political nationalism, economic development, and scientific inquiry.

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**Canada and International Civil Aviation, 1932-1948.** DAVID MACKENZIE. Toronto: University of Toronto Press, 1989. x, 314 p. ISBN 0-8020-5828-0.

That transportation forms a large component of nearly all aspects of Canadian history has become a near-platitude, and, like most platitudes, it is a basic truth. Strangely