dura, and the suburbs of Sydney strikingly familiar. Australian historian Ian Tyrrell's perspective on the mutual development of these regions is economic, but his story depends on documents and human characters, not statistics and jargon. It is economic history the rest of us can read.

Tyrrell follows efforts of reformers on both sides of the Pacific to build a "garden landscape" and repair environments damaged first by mid-nineteenth-century gold mining and then by wheat farming and livestock. His protagonists sought to settle the injured land with morally upright, white, middle-class families without an ethnic labor class; to reverse the already evident inequities of land ownership; and to escape the perils of cities. A new paradise of small-scale, diverse agriculture would echo the Jeffersonian yeoman ideal. Aesthetics were central to building a garden in the desert. Tyrrell contrasts this "renovationist" environmental concern with wilderness preservation on the one hand and Gifford Pinchot–style efficient use on the other.

Tyrrell analyzes three areas in which California and Australia shared ideas, people, and species: the introduction of exotic trees, irrigation, and biological control. The same reformers were often involved in all three endeavors, particularly the Australian botanist Ferdinand von Mueller and the California horticultural leader Ellwood Cooper. Californians imported various species of eucalyptus while Australians brought in Monterey pine, initially for ornamental purposes and to protect other plantings from wind and flood, later for strictly economic use as timber. Both grew rapidly but produced low-quality wood in their new homes.

Supplementing the oft-told story of irrigation in the American West, Tyrrell explores parallels with Australia and the direct influences of each place on the other, including the remarkable roles that Americans Elwood Mead and George Chaffey played in Australia. Advocates of irrigation hoped it would help establish middle-class farms, but instead it increased agricultural consolidation and urban development.

Tyrrell shows how the garden ideal made Cooper receptive to the idea of introducing natural enemies of pests. Following the success, in 1889, of the Australian vedalia beetle in controlling cottony-cushion scale, Cooper stridently resisted other methods of insect control and maintained a state program despite opposition from the U.S. Department of Agriculture (USDA). Tyrrell gets various details wrong, ignores federal entomologist Charles Valentine Riley's long-standing interest in biological control even before the cottony-cushion scale episode, and credits the Californians for what was, in conception and execution, a federal project. Tyrrell regrets the eclipse of biological control under USDA domination after Cooper's political demise in 1907, but in California neither domination nor eclipse occurred. A single, hasty citation to my book on the subject leaves me unconvinced that Tyrrell ever cracked the cover.

Tyrrell finds that even biological control of prickly pear, an Australian project that restored grazing land after 1935, was inspired by the garden ideal of small farming. Yet he seems surprisingly unaware of Australian-Californian cooperation in later projects on the biological control of weeds.

Tyrrell bemoans the failure of idealistic horticulturists to prevent land speculation and industrial development of agriculture, but seeds of that change appeared early. Although some businessmen who came to California to grow oranges and other fruit had utopian visions, most simply wished to make a profit and adopted whatever methods might help them achieve that end. Even biological control developed in that context. Tyrrell's work rewards us, however, as he traces the influence of garden ideals on the suburbs that replaced the orchards.

Tyrrell unfortunately implies that insects are not animals (p. 14) and that mildew is an insect (p. 176). His rather poor command of the relevant science, history of science, and American secondary sources is disappointing. So is his nearly total neglect of Hawaii, which figured prominently in some of the developments he examines. Still, his book will fascinate anyone with a professional or personal interest in the topics to which he has devoted this study.

RICHARD C. SAWYER

Steven J. Holmes. *The Young John Muir: An Environmental Biography.* xv + 309 pp., frontis., illus., apps., bibl., indexes. Madison: University of Wisconsin Press, 1999. $55.

The image of John Muir as passionate lover of nature and defender of wilderness has become a myth with potent meaning for many people, not just members of the Sierra Club. Steven Holmes has undertaken not to debunk the myth but to analyze Muir's first thirty-three years in an effort to bring new understanding to the ways in which his relationship to nature developed. In this "environmental biography" he uses the object relations approach, a nonpsychoanalytic method that examines all of the factors—personal, physical,

and natural—that influence a person's psychological and emotional development.

Holmes traces Muir's life from his birth in Scotland in 1838 to his first encounters with Yosemite from 1868 through 1872. Most biographers have relied heavily on Muir's own charming autobiography, *The Story of My Boyhood and Youth* (Houghton Mifflin, 1916), and on *My First Summer in the Sierra* (Houghton Mifflin, 1911), both books written in his later years, for information about this period. Holmes supplements these sources with extensive references to unpublished letters, journals, and other documents in attempting to recover how the young Muir felt at the time about his relations to family and friends, his encounters with nature, and his hopes for the future.

Both in the fields and on the seashore of Scotland and after his family moved to Wisconsin, Muir formed an emotional attachment to the natural world as a way of escaping from his father's harsh discipline. And he reacted to the imposition of his father's strict religious beliefs by adopting an increasingly liberal interpretation of God's working in and through nature. Early on in his life he developed especially strong attachments to particular plants and natural places. This deep love (which Holmes calls "erotic" in a nonsexual sense) was soon transferred to all of nature and eventually found an outlet in the scientific study of botany, which he pursued under the direction of Ezra Carr after he entered Wisconsin State University (later the University of Wisconsin) in 1861.

Holmes thinks that Muir's chemical studies with Carr contributed to his belief in ideas of attraction and repulsion, affinity, and connectedness in nature. Holmes has less to say about why Muir became so attracted to the study of glaciers, which he was convinced had carved out the Yosemite Valley, an idea that was dismissed by the head of the California Geological Survey, Josiah Dwight Whitney, but later confirmed by the studies of other geologists.

Holmes dwells at length on the meaning of Muir's platonic but deep-felt relationships with various botanizing women, especially Ezra Carr's wife, Jeanne. He discusses Muir's invention of ingenious devices, such as his early rising machine, which tipped him out of bed in the morning, and his desire to emulate Alexander von Humboldt's scientific explorations. He gives an account of Muir's impressions of the South during his famous thousand-mile walk to the Gulf of Mexico, a story not published until 1916. Muir's ongoing love affair with Yosemite and the Sierras when he finally reached California is analyzed in depth, as Holmes tries to understand the significance of Muir's statement that Yosemite was his "true mountain home."

Holmes believes that each of Muir's experiences and relationships—human, natural, or divine—became interconnected as Muir developed his own sense of selfhood and his place in nature. Holmes's analysis of Muir's psychic development, which draws on the interpretations of numerous other biographers and scholars in the fields of psychology and philosophy, may at times be too murky for those who would prefer a more straightforward biography, such as Thurman Wilkins's *John Muir: Apostle of Nature* (University of Oklahoma Press, 1995). Holmes's book, however, is a well-written and thoughtfully presented work that should be read by serious students of Muir's environmentalism.

PEGGY CHAMPLIN

Franz Boas. *Franz Boas: Among the Inuit of Baffin Island, 1883–1884: Journals and Letters.* Edited with an introduction by **Ludger Müller-Wille.** Translated by **William Barr**. xvi + 298 pp., illus., apps., bibl., index. Toronto: University of Toronto Press, 1998. $50, £37.50.

In a sense we have been waiting for this edition ever since George Stocking's pathbreaking 1965 essay "From Physics to Ethnology," which dealt with "Franz Boas' Arctic Expedition as a Problem in the Historiography of the Behavioral Sciences" (*Journal of the History of the Behavioral Sciences*). At that time no one had seriously analyzed Franz Boas's first field trip—the year that he spent among the Inuit of Cumberland Sound, on Baffin Island, Canada, 1883–1884. With this publication, we are now given a nearly complete account in Boas's own words. All students of Franz Boas and the history of anthropology will be grateful for the painstaking work of Ludger Müller-Wille, an associate professor of geography at McGill University.

The volume, a revised translation of a 1994 German edition, is prefaced by an excellent introduction covering Boas and German polar research in the early 1880s, human environmental relations in the Arctic (the prime subject of Boas's research), Boas's fieldwork methodology, a review of the original source material and issues of transcription and editing, and a final look at the relevance of Boas's work for contemporary Inuit. Among the useful appendixes are glossaries of English and Inuktitut words. The book is complemented by a modest yet comprehensive selection of Boas's drawings and pho-