

Book Review

The Brilliance of Charles Whittlesey: Geologist, Surveyor, Military Engineer, Civil War Strategist

Totten SM. 2022. The brilliance of Charles Whittlesey: geologist, surveyor, military engineer, Civil War strategist. Kent (OH): Kent State University Press. 276 p. 6 x 9 in., cloth. \$55.00. ISBN-13: 978-1-60635-436-0.

COLONEL CHARLES WHITTLESEY (1808-1886) was one of those few remarkable "men for all seasons" of the 19th century whose contributions spanned the realms of natural science, military engineering, archaeology, and history, but for whom proper recognition is lacking. Stanley M. Totten's new book resolves this deficiency. In 18 chapters the author traces Whittlesey's life. From early childhood in an Ohio pioneer family, this book winds through his days at West Point (when the academy's curriculum was only two decades old), early geological explorations in the coal fields of Ohio and the copper and iron ore deposits of Lake Superior, surveys of some of the nation's most noteworthy Native American earthworks, military engineering accomplishments during the Civil War, and establishment of a renowned historical institution. The book, including an insightful forward by Joe Hannibal, is an important contribution to the understanding of how modern concepts had their origin.

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their true importance. Let me explain the "hard-luck" characterization—which is not intended to detract from Whittlesey's accomplishments, and from which author Stanley Totten does not shy away from in his documentation. Throughout his life, Whittlesey had major disappointments that he overcame without dampening his spirit of challenging the unknown. This permitted him to contribute materially to the geological knowledge of Ohio and the Northwest Territory, the archaeological significance of Native American earthworks, the hydrologic workings of Lake Erie, and the defensive and offensive military strategies during the Civil War. A few of his challenges included: (1) in 1812, at the age of 4, he was nearly crushed to death when his parent's wagon overturned en route to Ohio from Connecticut; (2) he was not interested in farming; (3) despite being ill-prepared, he was able to secure an appointment to West Point, but graduated 31 out of a class of 32; (4) he found military service boring and, after a year and a half, he resigned his commission; (5) he staked claims in copper mines and iron ore deposits in the northwest, but none were particularly successful; (6) his coal and iron ore properties in Ohio were, similarly, not especially fruitful; (7) he prepared numerous geological reports and maps, but many were either rejected for publication or plagiarized by others; and (8) he strived to be Ohio's state geologist, but was passed over.

In spite of these disappointments, the author demonstrates how Whittlesey rose above them to leave lasting contributions to: (1) the stratigraphy of coal deposits in eastern Ohio, identifying up to 14 horizons; (2) the locations of copper deposits in the Keweenaw Peninsula and theorizing how Ohio Mound Builders ventured there to mine copper;



(3) the prediction of the future importance of the Mesabi Iron Range of Minnesota; (4) the early concept of continental glaciation and deposition of glacial drift and meltwater deposits; (5) the calculation of sea level depression during the glacial maximum and the likely rise in sea level if all the ice caps melted; (6) the existence of glacial lakes higher than Lake Erie and the development of beach ridges and dunes along their shores, one of which was later named in his honor; (7) the understanding of annual and storm-related oscillations of Lake Erie and designing shore erosion control schemes; (8) the design and execution of defenses for Cincinnati during the Civil War and a proposed strategy for offensive deployment of troops via steamboats; (9) the preparation of Ohio county and statewide geological maps; and (10) the founding of Western Reserve Historical Society, the preeminent historical organization of northeastern Ohio.

The book has a few minor deficiencies that are worth pointing out. It is printed on rather poor-quality paper that affects the readability of many of the historic illustrations, and some of the new maps are printed so light—and with such small print—that they are difficult to read. On page 3, the author notes that the *Firelands* portion of the Connecticut Western Reserve is "so named because the land had been cleared by fire." In reality, Wikipedia states: "It was legislatively established in 1792, as the 'Sufferers' Lands', and later became named 'Fire Lands' because the resale of the land was intended as financial restitution for residents of the Connecticut towns. . . . [where] Their homes had been burned in 1779 and 1781 by British forces during the American Revolutionary War."¹ We learn on page 15 that letters were written to "James Barbour (1775-1842), secretary of war" in support of Charles Whittlesey's appointment to the military academy; however, later in the page

we see that on "January 31, 1872", Charles' uncle wrote to his friend "Jim" Barbour that his nephew "had an abundant desire to learn." Unfortunately the date given for the letter is 30 years after Barbour's death. On page 19, we find that Whittlesey submitted a letter of resignation from the army to the president on July 10, 1832, to be effective "November 31, 1832"; with only 30 days in November, perhaps that is why his resignation was so readily accepted. On page 41, line 8, in discussing the Newark Earthwork, the phrase "they encompass about four and a half square miles and 3000 acres" is used, which probably should read *or* instead of "and" 3000 acres. On page 57, the direction of flow of the Black River, as indicated in the diagram, is reverse from its actual direction. Page 117, line 1, "In the 160s," should probably be "1860s." A number of other similar copyediting problems occur in the text that should have been corrected.

Despite minor deficiencies, the book is a valuable and detailed documentation of Charles Whittlesey's life's work, the significance of his many contributions, and particularly the development of scientific thinking in the mid-1800s. Thus, the book is certainly recommended to earth scientists, archaeologists, civil and coastal engineers, military historians, and those interested in the evolution of scientific theories in the 19th century.

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Literature Cited

- ¹ Wikipedia contributors. 2022 December 4. Firelands [webpage]. Wikipedia, The Free Encyclopedia. [updated 2022 December 4; accessed 2023 May 10]. <https://en.wikipedia.org/w/index.php?title=Firelands&oldid=1125564783>

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