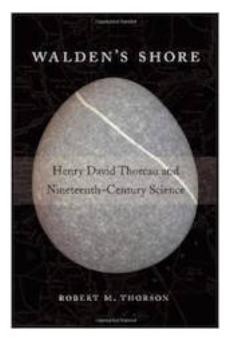
Walden's Shore: Henry David Thoreau and Nineteenth-Century Science (2014) by Robert M. Thorson, Cambridge: Harvard UP. 421 pp. Hardcover US\$29.95.

THE life and works of Henry David Thoreau evade simple categorising: his life interests ranged from his early apprenticeship in Emersonian Transcendentalism, to



more common activities such as being an essayist, a lecturer, a pastoral idealist, a land surveyor, and a pencil maker. In *Walden's Shore*, Robert M. Thorson adds one more occupation to Thoreau's job list: that of being a paid collector of museum specimens for Louis Agassiz. Agassiz, a European emigrant and professor at Harvard, was author of *Studies of Glaciers* (*Études sur les glaciers*, 1840). Thorson draws on the methodologies of bibliography studies, Ecocriticism, and the history of geology, and investigates another aspect of Thoreau's career – that of a field geologist with a keen insight into the glaciated landscape of Concord during the late Pleistocene.

Thorson, a professor of geology and author of Beyond Walden: The Hidden History of America's Kettle Lakes and Ponds (2009), is an expert on the formation and geological features of 'glacial lakes

extending from the cranberry bogs of Nantucket to the prairie potholes of Great Falls, Montana . . . [and] Walden Pond' (xvi). With his arduous and persistent close-reading of Thoreau's *Journal* (1837-1861), *Walden* (1854), 'Ktaadn' and other essays, Thorson summons Thoreau back from Walden's shore with his surveying compass and Gunter's chain (geodetic measuring device), fathoming 'a radial symmetry' (3) of Walden's western basin at the doorway of his cabin.

Walden's Shore consists of two parts. 'Part I. The Place of the Book' comprises five chapters that delve into the geologic reality of Walden Pond and Thoreau's scientific imagination – evinced by his field observation, nature writing, and physical collection of rock specimens. 'Part II. The Book of the Place' contains five chapters that envision the composition of Thoreau's nature writing, emphasising the influence of his field exploration of the biota of Concord. Most striking about the imaginative reconstruction of Thoreau as a self-taught geologist is Thorson's astute observation of the chronological parallels between the publications of Thoreau's nature writing and the heated debates in nineteenth-century American science on such issues as the Neptunism / Plutonism controversy and glacial theory between 1842 and 1862. Thorson traces the emergence of Thoreau's awareness of American geology back to his Harvard years from 1833 to 1837, in which he 'was almost certainly exposed to [Amos] Eaton's theories' (31), and so heavily influenced by the Neptunist-Wernerian school, which believes that 'rock had precipitated from a [heated] primeval, universal ocean' (28). Thorson

speculates that 'Thoreau's vision that it may have once "rained rocks" on Maine's Mount Katahdin' and that 'the mystical "water-world" imagery of *Walden*' (31) might have been influenced by the Neptunist school of thought. Thorson then marks Thoreau's discovery of Charles Lyell's *Principles of Geology* (1830-1833) in the library of Ralph Waldo Emerson in 1840 as a turning point from which he leans toward the Plutonist school of thought (34), which upholds that 'landscapes are endlessly created and destroyed during episodes of vigorous mountain building'—that is to say, volcanoes—and 'more protracted and passive episodes of erosion' (31).

Naturally, one of the most crucial instances in Thoreau's growing awareness of the history of landscape formation in Concord should be his encounter with glacial theory, given that 'all of New England lay buried beneath the Laurentide Ice Sheet, the largest on Earth, covering much of North America' (85) and that Thoreau 'lived during a time of changing snow-fall patterns near the end of the Little Ice Age' (84). Underscoring Thoreau's employment by Agassiz in 1847 and their correspondence, Thorson excavates further evidence that shows Thoreau's 'arctic vision' throughout his writings. Based on Thoreau's poetic yet scientifically grounded musings on the glacial landscape of Concord, Thorson theorises that his self-trained scientific eyes must have realised the 'topography of a collapsed glacial delta' of the Walden paleo-valley. After all, Walden Pond is 'a coalesced lake created by the filling of four separate kettle basins with ground water' after 'a discrete block of ice became isolated from the others during the final stage of glacial meltdown' (144).

Other nineteenth century scientists that Thorson reasons must have influenced Thoreau's evolving scientific intuitions include Charles Darwin and Alexander von Humboldt. Thorson also notes that since Thoreau's major writings predate the publication of Darwin's *Origin of Species* (1859), he would have been more influenced by Darwin as a geologist whose works such as *The Voyage of the Beagle* (1839) and *Geological Observations of South America* (1846) left a lasting impression upon Thoreau. *Walden's Shore* is an ambitious attempt at conjoining the field of science and literary criticism by choosing Thoreau as a prime example of interdisciplinary thinkers. It is also a challenge to ecocriticism, pushing the limits of literary criticism by broadening its horizon with solid scientific research combined with most creative and vivid literary imagination.

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