HISTORY

Creator — or creationist?

Kevin Padian weighs up a life of a great science popularizer who resisted Darwinism.

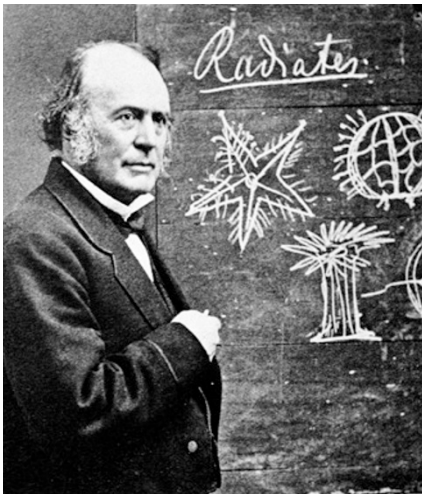
Louis Agassiz, a protégé of Georges Cuvier and Alexander von Humboldt, left his native Switzerland for a lecture tour in the United States in 1846. He aimed to boost his reputation, observe the country's geography and wildlife, meet American savants and see their collections. He was so successful an orator on natural history that he ended up with an offer to become a professor at Harvard University in Cambridge, Massachusetts; eventually, his Museum of Comparative Zoology there became the first publicly funded building in the state.

In Christoph Irmscher's balanced and humanistic biography, Agassiz emerges as a genius in natural history and a kind of Svengali for students and the public alike. Yet his stubborn egocentrism eventually undid much of his scientific legacy.

Irmscher, an Americanist who has previously tackled the naturalist John James Audubon and the poet Henry Wadsworth Longfellow, shows an exquisite sensitivity to nature in his portrayal of Agassiz. But his subject, as he acknowledges, does not reveal himself easily. Agassiz spoke incessantly and wrote copiously, but not about his feelings or motivations. So for his insights into the man, Irmscher turned to Agassiz's circle: his wives (the first he treated shabbily and left, the second became his amanuensis), his students and assistants (several of whom eventually aired deep grievances about how he treated them) and his colleague, the botanist Asa Gray (a friend and correspondent of Charles Darwin).

What accounted for Agassiz's popularity? He was a great science communicator, making complex concepts simple and accessible in lectures. He was exotic and authoritative at a time when the United States had no postgraduate scientific institutions. He projected the aura of the great European scholars, and played it to the hilt. And he consoled his audiences by assuring them that life had a purpose, a divine design, discernible to anyone who would undertake to study it assiduously and interpret it according to his teachings. Agassiz excited ordinary people about nature, and they responded with devotion.

He was, however, too grand and overbearing a figure for anyone beneath him to succeed. He was possessive and jealous, and believed that ideas or work produced by anyone he had trained belonged to him. His imperiousness was not unusual, especially for those trained in Europe, where Herr Professor was Lord. Irmscher beautifully details a man at odds with himself, who imagined his actions and motives to be much better than they were. He also shows us — almost reluctantly, because we feel that he wants us to understand his subject as a better man — how Agassiz's views of human races, especially Africans, were even more self-contradictory and poisonous than previous biographers have expressed.



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Louis Agassiz in his prime.

Why do we still read Agassiz? Well, we don't. By modern standards he was a windbag, well-versed in natural history but full of cock-and-bull about divine guidance of life, and vitriol for those who disagreed. His popular reputation in the mid-Victorian era held even as his scientific reputation declined. That decline can be traced to two factors. Despite Agassiz's prodigious knowledge, he stubbornly rejected evolution and over-insisted on the importance of glaciers in forming geological features. Darwin's view of the world succeeded because he could explain by purely scientific mechanisms, using the facts and literature available to all, the same phenomena that Agassiz (and others, such as the British naturalist Richard Owen) could not.

Here is where I feel Irmscher falls short. He misjudges Darwin as an armchair naturalist, a theorizer, who happily unpacked boxes of specimens that had been collected by others and sent to him at his country sinecure. This is ironic because, although Agassiz was a fine field biologist, he ran a huge campaign to entice the public to send him specimens, which ultimately netted him much more than his museum could hold or organize.

Louis Agassiz: Creator of American Science
CHRISTOPH IRMSCHER
Houghton Mifflin Harcourt: 2013. 448 pp. $35

By contrast, Darwin produced copious works from his five years on *HMS Beagle*; solved long-standing problems in geology, biogeography and natural history long before he returned to England; was elected to several scientific societies within a few years of returning from the *Beagle's* voyage; and was a great natural experimenter and collector whose specimens alone changed forever the ideas of several disciplines. Darwin was able to unpack those boxes, years after he grew too infirm to travel, because he knew precisely whom to ask for them and why they would be important.

The biologist today who doesn't read Agassiz misses some great treatments of glaciology, invertebrates and fishes. The biologist who doesn't read *On The Origin of Species* knows nothing about how evolution works.

More importantly, Irmscher's interest in presenting Agassiz as a sympathetic (not to say justifiable) personality comes at the expense of situating his subject's views in their times and intellectual traditions. We gain only a rough sense of what he thought about evolutionary ideas (and what he proposed in their stead), how his thoughts on embryology and taxonomy were framed philosophically, and how the intellectual traditions he represented (whatever they were, apart from those inspired by von Humboldt) squared with biological thought in Europe and America.

However, philosophy is not the main thrust of this book. Irmscher is a probing and sensitive biographer, the best that Agassiz and his circle could hope for. For a fuller perspective of the man and his times, this should be read with Edward Lurie's *Louis Agassiz: A Life in Science* (Univ. Chicago Press, 1960), Mary Winsor's *Reading the Shape of Nature: Comparative Zoology at the Agassiz Museum* (Univ. Chicago Press, 1991) and Louis Menand's *The Metaphysical Club: A Story of Ideas in America* (Farrar, Straus and Giroux, 2001). ■

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