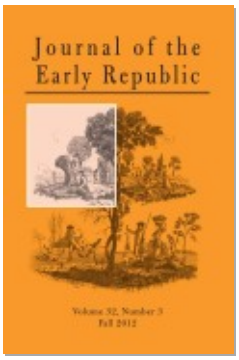
A Democracy of Facts: Natural History in the Early Republic (review)



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A Democracy of Facts: Natural History in the Early Republic. By Andrew J. Lewis. (Philadelphia: University of Pennsylvania Press, 2011. Pp. 204. Cloth, $39.95.)

Reviewed by Gordon M. Sayre

In 1814 the Philadelphia scientist Benjamin Smith Barton received a letter from one H. B. Trout, a resident of western Pennsylvania, asking, "what climate of the Unighted-States would be the most favorable to the growth of the poppy—what sort of manner would be best calculated to put on the ground on which the poppy is to be sowed?" (62). Mr. Trout had read Barton's textbook *Elements of Botany* (1804), where Barton wrote that "Opium, the produce of a species of Papaver, or Poppy . . . might be cultivated in the countries of the United States, with much *pecuniary* profit" (286). A few months later George Washington Trout, possibly a relative of the first correspondent, wrote another letter to Barton, basing his appeal upon different principles. G. W. Trout praised Barton's "patriotism in recommending to the people of the United States the culture of the poppy" and cast the pursuit of profit as secondary to "the Desire of Utility." Andrew Lewis read the letters from the two Trouts in Barton's correspondence preserved at the American Philosophical Society. He adds, sadly, "There is no evidence that Barton answered these letters" (63).

Lewis's book examines the relationships among early American naturalists: on the one hand those among the young nation's elites "who trafficked in learned discourse and possessed access to erudite transatlantic correspondents and membership in polite institutions" (7), and on the other hand those such as the Trouts, common people who observed phenomena and collected specimens across the wide and little-known expanses of the young United States, but who also sought to benefit from the scientific advances in botany, geology, or *materia medica*. Then as now there was a tension between an impulse to amass knowledge for disinterested scientific purposes and a desire to find and exploit natural resources for economic gain. The case of opium poppies, however, reveals how our sense of nature's bounty has also profoundly changed across two centuries.

Lewis proposes the term "democracy of facts" to describe decentralized, volunteer efforts to observe and document American nature, the crowd-sourcing of the day. The book focuses on the period from the

1790s to the 1830s. At the start of this period, distinct scientific disciplines and expertise had not yet formed in Anglo America, and therefore the "practices of natural history that relied on individuals' ability to see and to hear, touch, taste, and smell . . . were at once the minimum, and, in some respects, the sole requirement to participate in the era's natural history" (5). By the end of the period, state and federal governments were underwriting scientific expeditions and surveys, and universities were training students in scientific specialties. Other scholars such as Susan Scott Parrish in *American Curiosity: Cultures of Natural History in the Colonial British Atlantic World* (Chapel Hill, NC, 2006) and Thomas Hallock in co-editing *William Bartram, the Search for Nature's Design: Selected Art, Letters, and Unpublished Writings* (Athens, GA, 2010) have studied how American naturalists such as Bartram often felt exploited by their wealthy British patrons, who reaped the cultural prestige of identifying and presenting new species to the Royal Society, yet did not sufficiently pay for nor appreciate the hard work and deprivation required to find the specimens. Lewis's study looks at relations within America, between scientific naturalists and the public. Lewis proposes in opposition to the democracy of facts an "empire of reason . . . those who believed they had [the] authority to determine and police the proper methods of nature study" (8). The elites who built cabinets of curiosities and proposed grand systems and theories were regarded with some contempt by common collectors.

The strongest chapter in the book is titled "Submerging Swallows." Many periodicals in the early republic carried eyewitness accounts of swallows that were seen drenched in muddy wetlands and riverbanks in the springtime. Observers believed that the birds hibernated, or passed the winter in a state of suspended animation at the bottoms of frozen lakes. Lewis documents how the stories spread and why they gained credence—the democracy of facts favored observation over systematizing and regarded experimental evidence as unnecessary or inconclusive. Dr. Charles Caldwell of Philadelphia tested the hypothesis by dunking swallows underwater for three hours, and reported, "Our birds were reduced, not to a state of torpidity, nor of suspended animation, but of absolute death" (32). Yet Caldwell could not persuade readers that swallows migrated south for the winter.

A subsequent chapter concerns the mound builders of the Ohio valley and the artifacts unearthed from mound sites. Lewis continues the

opposition between democratic amateur observers and imperial elite theorists by casting the antiquarians of Cincinnati and rural Ohio valley, notably John Clifford of Lexington, Kentucky, and Caleb Atwater of Circleville, Ohio, against eastern elites including Thomas Jefferson, Samuel Latham Mitchill, and James Bowdoin. The latter claimed that contemporary American Indians were incapable of building monuments or leaving behind valuable artifacts, and proposed theories that Malays, Hindus, or Aztecs built the mounds and then disappeared or gave way to contemporary American Indians. Lewis criticizes previous studies of the mound-builder myth: "scholars too quick to focus on the early republic's contributions to the myth of the vanishing Indian [who] miss as well a significant trend: the shift of the locus of antiquarian activity from east to west" (78). But the category of "antiquarian" does not adequately characterize the democratic observer, nor the westerner, for Caleb Atwater himself engaged in speculation about the Asian origins of the mound builders, and as Lewis acknowledges toward the end the chapter, later in the nineteenth century antiquarians concocted outrageous theories about the mounds, such as William Pigeon's *Traditions of De-Coo-Dah* (1853).

Natural theology brought a Christian morality to natural history observation, in a manner consistent with the democracy of facts: "better to wonder at nature than to circumscribe it with meager human attempts" (113) such as by attempting grand theories of nature's origins or principles. The works of popular natural theology that Lewis discusses in this chapter break down his opposition between elite and populist, and between European and American. Benjamin Smith Barton translated and edited *Studies of Nature* (1808) from a French text by Henri Bernardin de Saint-Pierre. Likewise geologist Rev. Edward Hitchcock's *Utility of Natural History* (1823) "began to push natural history and the theology of nature away from its embrace of the democracy of fact and toward a theological approach to nature that resembled in practice and prescription an empire of reason" (120).

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