

FROM SEED MEN TO BIRD WOMEN:
PENNSYLVANIANS AND THE ENVIRONMENT

Stephen H. Cutcliffe

The more we search . . . works in nature, the more wisdom we discover whether we observe either the mineral, vegetable, or animal Kingdom.

—John Bartram

Instead of always trying to impose our will on Nature we should sometimes be quiet and listen to what she has to tell us.

—Rachel Carson

*M*any of us, academics and the general reading public alike, find biographies fascinating. I'd warrant that we all have them on our bookshelves, read them for entertainment, and find in them many illustrative examples for our teaching. I would further posit that well-researched, fully contextualized, and gracefully written biographies can be rich sources of historical understanding. Thus, I would like to argue that appropriately selected biographical snapshots can be readily integrated into classroom teaching at almost any level and would capture our students' interests. The following set of individuals can be connected to important trends in environmental history and integrated nicely into several major periods of American history: colonial, early national, pre-Civil War industrialization, Progressive Era, 1920s and New Deal, and postwar modern America.

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John (1699–1777) and William (1739–1823) Bartram

The father-and-son team of botanical explorers, John and William Bartram, lived near the outskirts of Philadelphia on the Schuylkill River in a house with a garden (greatly altered) that survives as a historical site.¹ John, the father, was a largely self-educated farmer who increasingly specialized in collecting and identifying rare and little-known plants. At a time when most colonists saw wild places in terms of land that could be cleared for cultivation, Bartram recognized the value of collecting and recording botanical specimens and effectively made himself into a naturalist at a time when such a profession was essentially unknown in this country. Bartram expanded his efforts and took collecting trips that ranged from New York and Connecticut southward through the Carolinas, Georgia, and ultimately Florida. He identified a very large percentage of the wild plants known in America and sent back to England numerous boxes of specimens by the middle of the eighteenth century. Well respected by prominent naturalists of the day, he received appointment as King's Botanist in 1765 in recognition of his services and helped to found the American Philosophical Society in 1769. John also established a significant seed and rare plant garden at his home, which not only received considerable income from customers such as wealthy British gardeners, but also served as an important resource for the development of systematic botanical knowledge.

John's son William, also a botanical naturalist, spent much of his youth on collecting trips with his father. A talented young artist, he often drew pictures of their specimen acquisitions. Left to his own devices, William would have preferred a career as a botanist/artist, but his father pressed him into more traditional fields. Lacking the desire and perhaps the ability, he failed in a North Carolina merchant venture and at starting an indigo plantation in Florida. Returning to Philadelphia, William found a willing British patron in John Fothergill, who sought to acquire William's American plant drawings for his collection. This support allowed William to subsist as a naturalist, pay off his business debts, and undertake a four-year, 2,400-mile journey through the southeast, which ultimately established his position in American natural history. Upon his return in early 1777, William began to write up his journal notes. He struggled mightily and did not publish the book, known in shorthand as his *Travels*, until 1786. William continued to work closely with many renowned naturalist



FIGURE 1: William Bartram, *Franklinia alatamaha*. First discovered by the Bartrams in 1765, this small tree named after Benjamin Franklin is now extinct in the wild and only survives from seeds propagated in the Bartrams' Philadelphia garden. (Image courtesy of the American Philosophical Society.)

scientists, including Thomas Say, the entomologist and conchologist, and the ornithologist Alexander Wilson.

Viewed together, the Bartrams' environmental legacy rests on their ability to recognize both the value and the interconnectedness of all life, an understanding they achieved a generation or more before Emerson and Thoreau, who are often viewed as the originators of American romantic environmental writing. Although by no means unknown, the Bartrams have received little recognition for their early promotion of natural history, its diversity, and the desirability of its preservation. If one wanted to extend the environmental

theme in one's teaching of the colonial and early national periods, the Bartrams present an excellent opportunity.

John James Audubon (1785–1851)

Although few of our students will know of the Bartrams, most, if not all, will have heard of the naturalist painter John James Audubon.² The author of the justifiably famous four-volume masterpiece *The Birds of America* traveled widely in the United States, but many students may not realize that he began his American ornithological career in Pennsylvania. Born the illegitimate



FIGURE 2: John James Audubon, *Long-tailed Mountain Tit-mouse*, January 22, 1805. The *Tit-mouse* is the earliest-known surviving drawing from Audubon's first trip to the United States. (Image MS Am 21 [2] courtesy of the Houghton Library, Harvard University.)

son of a French sea captain and Santo Domingon chambermaid, Audubon spent his early childhood in Santo Domingo and his teens in France. In 1803 Audubon's father sent him to Mill Grove, an investment property outside Philadelphia that included a lead mine, in part to manage it, but more immediately as to avoid conscription into Napoleon's army. Audubon arrived in America with a fledgling interest in birds and only modest illustration skills. During his courtship of his neighbor's daughter, Lucy Bakewell, Audubon often went birding and both wrote of and sketched the birds he encountered. While engaged in a number of business ventures, he maintained his interest in birds. The idea for *Birds of America* came to Audubon in part out of a chance encounter in 1810 in Louisville, Kentucky, with Alexander Wilson, friend of William Bartram and author of *American Ornithology*, for which he was seeking subscriptions. Wilson had heard of the budding naturalist painter Audubon and sought him out. Although Wilson left empty-handed in terms of subscriptions, he had planted the seed for Audubon's ultimate masterpiece—the idea that finally blossomed forth in the 1820s.

I will omit the particulars of Audubon's major work because they are generally as well known as the volumes are important. My point in mentioning Audubon at all, who clearly lived but a few years in Pennsylvania, is to suggest the Keystone connection as a pedagogical mechanism for getting students to think further about early ornithology, bird and mammal appreciation, and the issue of preservation. Audubon's well-known enjoyment of hunting for his specimens was not at all unusual at the time, which makes for an interesting point of discussion with students.

George Inness (1825–1894) and Jasper Francis Cropsey (1823–1900)

George Inness and Jasper Francis Cropsey are generally considered second-generation members of the Hudson River School of landscape painting.³ Neither was born in Pennsylvania, but each frequently painted notable landscape scenes of the state. Both men were born just as Thomas Cole and his contemporaries were starting to paint landscapes highlighting the wilderness exceptionalism of America's natural beauty in the Hudson Valley and the perceived need for its preservation from urbanization and industrialization. This important theme in environmental history can be explored through a careful examination of the paintings themselves. Cole and his contemporaries focused on wild places and how they related to agricultural farms

and communities of the day. By the time Inness and Cropsey had come of professional painting age, industry and particularly the railroad had begun to intrude upon the landscape, literally and figuratively, and the question had become how to depict this change of scenery, about which people had conflicting views. Inness's *Lackawanna Valley* (1855) and Cropsey's *Starrucca Viaduct* (1865) can help our students understand the shifting ideals of the mid-nineteenth century.⁴

Inness's early landscapes from the 1840s, with their dark foregrounded pastoral scenes, were often criticized for following the old European masters too closely. During a European tour in 1853–54, Inness spent time in France and fell under the influence of the Barbizon School, which emphasized color, light, and atmosphere. When he returned to America, his painting took on a freshness of light and informality of arrangement. *Lackawanna Valley*, generally considered one of his best works, comes from this period. It depicts the



FIGURE 3: George Inness (American 1825–1894), *The Lackawanna Valley*, c. 1855, Inness's depiction of the railroad near Scranton, Pennsylvania, is generally viewed as a positive accommodation of the newly emerging technology on the landscape. (Oil on canvas, 33 7/8 × 50 3/16 inches [86 × 127.5 cm]. Gift of Mrs. Huttleson Rogers, Image courtesy of the National Gallery of Art, Washington, DC.)

roundhouse of the Delaware, Lackawanna and Western Railroad in Scranton. Inness received \$75 from the railroad for this commissioned piece, and for that reason students need to analyze it cautiously. They should ask what, if anything, Inness is saying about the changing American landscape. While some might view the scene as a lament for the lost beauty of nature, others could see it as a positive image of the future of America. Art historian Nicolai Cikovsky called it “a frank, unsentimental pictorial account of a particular encounter between nature and the machine.”⁵ The roundhouse itself, depicted somewhat larger than its actual size, the elevated perspective, and the bright early morning sunshine seem to present an “optimistic” image. So too the figure in the foreground appears relaxed and at peace with the approaching locomotive. Even the stumpage can be viewed as symbolic of progress and expressive of a certain harmony between nature and technology. If this positive view accurately describes Inness’s feelings, then it puts him at odds with the general message of the Hudson River School on the symbolic purity of American wilderness.

Students could then compare *Lackawanna Valley* with Jasper Cropsey’s *Starrucca Viaduct* (1865), which depicts a panoramic view of the Erie Railroad’s equally impressive stone structure spanning the wide Starrucca Valley in the very northeast corner of Pennsylvania. Built in 1848, the viaduct ran 1040 feet (considered by many as the longest in the world at the time) and was as important to the Erie as was the Scranton roundhouse to the Delaware, Lackawanna and Western. Cropsey, much more an acknowledged member of the Hudson River School than was Inness, saw landscape as the highest form of art and considered nature a direct manifestation of God’s handiwork. His paintings, often utilizing autumnal colors, portrayed the largely unspoiled rugged natural landscapes of America. In *Starrucca* the panoramic scene is peaceful and serene. The railroad does not appear particularly intrusive, nor has nature been “defaced” as one might view the Inness painting. In fact, the foreground is quite wild, with a pastoral middle distance. Here the landscape predominates, not the railroad, so a different sort of accommodation exists. Perhaps Cropsey hopes that the railroad is being absorbed, not the other way around. The painting suggests that ultimately, given enough time, nature will conquer even the greatest edifices of the technological sublime. By comparing these two Pennsylvania scenes, students can ask critical questions about the relationship between technology and civilization, and about the natural settings in which they were placed.



FIGURE 4: Jasper Francis Cropsey (American, 1823–1900), *Starrucca Viaduct, Pennsylvania*, 1865. In contrast to Inness's *Lackawanna Valley*, Cropsey's depiction of the railroad foregrounds the natural setting, while suggesting a far less intrusive viaduct and train. (Oil on canvas, 22 3/8 × 36 3/8 inches [56.8 × 92.4 cm]. Toledo Museum of Art [Toledo, Ohio]. Purchased with funds from the Florence Scott Libbey Bequest in Memory of her Father, Maurice A. Scott, 1947.58. Photo Credit: Photography Incorporated, Toledo.)

Gifford Pinchot (1865–1946)

Many consider Gifford Pinchot Pennsylvania's most important native son in terms of conservation issues.⁶ Although he was born in Connecticut, the Pinchot family estate, Grey Towers in Milford, Pennsylvania, was his official residence for much of his life, including during his two terms as state governor (1923–27 and 1931–35).

Pinchot was trained as a forester, first at Yale and more significantly in Europe afterwards, effectively becoming the first American professional to call himself such. Pinchot soon entered the federal government, serving on an 1896 National Forest Commission and then as the nation's chief forester in the Department of Agriculture under presidents William McKinley and Theodore Roosevelt. Especially during the Roosevelt administration, Pinchot was largely responsible for developing a "wise use," utilitarian approach to managing natural resources that set aside increasing amounts of national forest land for potential productive future use. This theme,



FIGURE 5: Grey Towers, Milford, Pennsylvania, c. 1886. Gifford Pinchot's family home, Grey Towers, is depicted here in about 1886, shortly after completion. Gifford's father, James, disturbed by then-prevalent logging practices, had encouraged his son to enter into forestry as a profession. (Image courtesy of U.S. Forest Service, Grey Towers NHS.)

especially when juxtaposed against the preservation tendencies first suggested by the Hudson River School painters, and later promoted by men such as John Muir, is central in American environmental history. Pinchot sat for several decades at the very center of this debate. Then, as Pennsylvania's commissioner of forestry and as governor, he generally sought to restrain Pennsylvania utility companies from monopolizing and overexploiting the state's natural resources. He promoted progressive conservation principles to state-level logging operations. He protected and expanded state-owned forest lands, including the replanting of cut-over and denuded areas. Pinchot later put it this way: "A well-wooded state made dollars and sense."⁷ For students wishing to delve more deeply into Progressive and New Deal era conservation policies at both the national and state levels, Pinchot makes an ideal biographical entry point.

Rosalie Edge (1877–1962)

A contemporary of Pinchot but far less well known, Rosalie Edge made a significant mark on Pennsylvania's landscape.⁸ A long-time resident of New York City, Edge was a national environmental crusader who made her impact primarily through ornithology and land preservation. She was concerned that many conservation groups such as the Audubon Society and federal wildlife and preservation agencies were failing, sometimes willfully, to live up to their stated missions. To provide a political front for her individual crusade, Edge created the Emergency Conservation Committee (ECC) in 1929. Using the ECC to support various causes—ranging from the promotion of waterfowl hunting regulations to the creation of new national parks such as Olympic and Kings Canyon—Edge became a feared “hellcat” of a crusader. She interacted with many leading natural scientists and environmentalists of her day, including Bob Marshall, Aldo Leopold, David Brower, and Roger Tory Peterson. Her concern for the effect of toxic pesticides on bird populations provided significant input into Rachel Carson's later work. Edge's career belies the common belief that a dead zone of environmental activity existed following the decline of Progressive conservation and prior to the resurgence of a postwar modern environmentalism.

For most Pennsylvanians, the woman whom the *Altoona Tribune* once called the “Glorious Joan of Arc of Conservation” made her most important contribution by purchasing land and establishing the Hawk Mountain Sanctuary in Kempton, Pennsylvania. Although she could not know it at the time, a regional Cabella's sporting goods store, with its own fiberglass mountain display of taxidermy, would come to be located not far to the sanctuary's west along present-day Route 78. What might students think about that juxtaposition of mountains, one real and the other artificial, each with a display of stuffed birds and mammals? One, Hawk Mountain, is an example of a grassroots habitat/flyway preservation effort, while the other, Cabella's, represents more industrialized and commercial approaches to game management. The two places attract large numbers of visitors every year, with many individuals traveling to both locations. This curious juxtaposition could be the basis for many instructional moments and conversation with students.

Rachel Carson (1907–1964)

If Gifford Pinchot is conservation's favorite native son from Pennsylvania, then Rachel Carson must surely be the state's favorite environmental daughter. Carson was born and raised in Springdale, not far from the Allegheny River

northeast of Pittsburgh. She earned a BS in science from the Pennsylvania College for Women (now Chatham College), then an MA in zoology from the Johns Hopkins University. Carson soon went to work for the U.S. Bureau of Fisheries, first as an aquatic biologist, then as a scientific writer, and eventually as editor-in-chief at the expanded and renamed U.S. Fish and Wildlife Service. During this period Carson published extensively—popular science essays in major newspapers including the *Baltimore Sun*, articles in popular magazines such as *Atlantic Monthly* and *Collier's*, and a series of well-received and best-selling books about the oceans, including *The Sea Around Us* (1951).

Following this book she was able to officially retire and devote the rest of her life to writing, most notably *Silent Spring* (1962). This landmark book not only addressed the indiscriminant use of pesticides, especially DDT, and



FIGURE 6: Rachel Carson at Rosalie Edge's Hawk Mountain Sanctuary, located in Lehigh County, Pennsylvania, in about 1960. (Photo by Shirley A. Briggs; used by permission of the Lear/Carson Collection, Connecticut College.)

its implications for birds, but also opened Americans' eyes to the impact of chemicals in their daily lives. Carson redirected the public's perspective on the environment, moving it beyond preservation and conservation issues, expanding environmental awareness, and raising issues of human health and well-being. A teacher looking for a way to introduce students to the modern post–World War II environmental movement could not do better than to select Rachel Carson.

With these eight individuals, teachers can help students connect Pennsylvania with key periods and ideas in environmental history. Biographies can expand upon the material in standard classroom texts, capture the students' interest, and illuminate changes over time in American environmental thought and action.

NOTES

1. The standard joint biography for John and William Bartram is Thomas P. Slaughter, *The Natures of John and William Bartram* (New York: Knopf, 1996).
2. There are numerous biographies of Audubon, but I have drawn on Richard Rhodes, *John James Audubon: The Making of an American* (New York: Knopf, 2004).
3. For this section I have drawn on Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America* (New York: Oxford, 1964); Nicolai Cikovsky, "George Inness and the Hudson River School: 'The Lackawanna Valley,'" *American Art Journal* 2 (Autumn 1970): 36–57; and Susan Danly and Leo Marx, eds., *The Railroad in American Art: Representations of Technological Change* (Cambridge, MA: MIT Press, 1988).
4. This theme is briefly introduced by Randall M. Miller and William Pencak in their chapter on "Art," in *Pennsylvania: A History of the Commonwealth*, ed. Miller and Pencak (University Park: Pennsylvania State University Press, 2002), 538–40, where they explicitly make reference to Inness's *Lackawanna Valley*, albeit without providing the image itself.
5. Cikovsky, "George Inness," 52.
6. The standard biography is Char Miller, *Gifford Pinchot and the Making of Modern Environmentalism* (Washington, DC: Island Press, 2001).
7. *Ibid.*, 288.
8. Dyana Z. Futmansky, *Rosalie Edge, Hawk of Mercy: The Activist Who Saved Nature from the Conservationists* (Athens: University of Georgia Press, 2009).
9. Linda Lear's *Rachel Carson: Witness for Nature* (New York: Henry Holt, 1997) is the standard biography of Carson.