In four days during late June 2012, the reporting team of Lisa Song, Elizabeth McGowan, and David Hasemyer authored a series of investigative reports on an enormous oil spill in the United States, a regulatory system that had serious flaws and failures, and the disastrous effect of the spill on the lives of people who lived in the Michigan communities nearby. Their stories, and six more articles in the months to come, were published on the website InsideClimate News of Brooklyn, NY.

The work of the reporting team was classic environmental journalism. They spent 15 months on a story of the most costly onshore oil fiasco in US history, a ruptured pipeline and spill that had been largely ignored outside of the Kalamazoo River region. From the opening scene-setting lead to the why-you-should-care nut paragraphs, the narrative featured in-person interviews, paper trails, timelines, maps, government responses, activist group outrage, and plenty of data. In 2013, the trio won the Pulitzer Prize, journalism’s highest honor, in the category of national affairs reporting. The other finalists were from the Washington Post and the Boston Globe.

Environmental journalism and its antecedent, science writing, had won Pulitzer Prizes in the past, the first in science in 1923 to Alva Johnson of The New York Times. But the Michigan oil spill series felt different because of its publication in a five-year-old, web-only, nonprofit, all-environment site. In the world of the web, the larger, better-funded, general interest publications ProPublica and The Huffington Post were honored with Pulitzers in 2010 and 2012, but 2013 was the first time a specialized site founded and focused on a particular environmental issue, climate, came out on top.

At the time, InsideClimate News had a staff of four reporters and no office. Publisher David Sasson and editor Stacy Feldman began the site in 2007, making its content available for free and partnering with larger journalism organizations to disseminate the work. Its funding model, which largely depended on foundation donations and individual pledges, was similar to national sites such as ProPublica and the Center for Investigative Reporting as well as regional outlets such as MinnPost. (Full disclosure: MinnPost was where I was one of the two founding environmental journalists.) This funding model was one answer to the financial downturn and rapidly shifting economics of the media industry after the turn of the 21st century. The Associated Press
reported: “In a sign of a rapidly changing media world, a relatively unknown New York-based online nonprofit news site joined some of the country’s most well-known media outlets in claiming a Pulitzer Prize, the highest honor in journalism” (Brainerd, 2013). InsideClimate News was not a one-hit wonder, either; the team was a Pulitzer finalist in 2016 for its nine-part investigation of Exxon’s 40-year knowledge of, research into, and subsequent denial of, climate change.

With the awarding of the Pulitzers to InsideClimate News, ProPublica, and The Huffington Post, there was a temptation to say online news had “arrived,” but citizens had been getting their news via digital delivery for nearly two decades. The InsideClimate News Pulitzer did represent the continued importance of writing stories about environmental issues, even as it highlighted the changing nature of journalism in the second decade of the 21st century. As such, InsideClimate News and its team joined a trail of regular coverage of the environment – defined here as the gathering, writing, editing, and distribution of information about the interaction of people and the natural world, and issues related to that interaction – with roots to the 1960s and even links to writings from centuries past.

Ancient texts

The natural world and the interaction of humans with it was a common topic of ancient thinkers and writers just as it has been for those of our times. (For more on this idea, see Brady and Neuzil (2005).) As such, the keywords in ancient texts are not all that different from those in current stories about the environment. Of course, one would be advised not to read the ancients too literally, but even seen as metaphor, there are similarities that cut across the centuries.

For example, pollution began to appear regularly in the media as a social problem in the 19th century in Western societies as the harmful effects of the industrial revolution were felt by more and more people. But this was not the first time pollution was mentioned as a social concern; the origins of the word are from the Latin pollut, which means soiled or defiled. In the Hebrew Bible, the authors who collected the works of the biblical prophet Isaiah spoke of it eight centuries before Christ:

The earth dries up and withers, the world languishes and withers; the heavens languish together with the earth. The earth lies polluted under its inhabitants; for they have transgressed laws, violated the statutes, broken the everlasting covenant.

(Isaiah 24:4–5)

Isaiah is considered a major prophet: “For versatility of expression and brilliance of imagery Isaiah had no superior, not even a rival. His style marks the climax of Hebrew literary article” (Orr, 1939, p. 885). When he spoke of the Second Coming, Isaiah says, in two of his memorable phrases, that “the desert shall . . . blossom as the rose” and “waters shall burst forth in the wilderness” (Isaiah 35:1–10). Undoubtedly, Isaiah used examples from nature in ways that could make the audience understand the main points. Most people lived more closely to nature in ancient times than today; such themes would have made sense. “The Lord God has given me a well-trained tongue, that I might know how to speak to the weary a word that will rouse them,” (Isaiah 50:4) is a description that could apply to journalists in any era.

In the passage on pollution from Chapter 24, the “everlasting covenant” referred to is from the book of Genesis and the time of the great flood, when Noah, in association with every living creature, becomes a partner with God. Isaiah states that the people have broken the covenant, thus threatening the natural order of things. When the covenant is destroyed, the earth dries up, becoming withered, barren, and polluted. Does he mean pollution in a literal sense? Or, as seems more likely, is pollution in this passage a metaphor for sin? Perhaps it does not matter; it is only important to note that pollution meant something very, very bad in the days of the prophet.
Isaiah was a keen observer of the natural world and his phrase “voice in the wilderness” (Isaiah 40:3) came into common use, repeated in all four Gospels and eventually making its way into the title of a book by Edward Abbey, a nature writer not usually associated with religion. (He was an atheist.) Consider also these images from Isaiah Chapter 11:

The wolf shall live with the lamb, the leopard shall lie down with the kid, the calf and the lion and the fatling together, and a little child shall lead them. The cow and the bear shall graze, their young shall lie down together; and the lion shall eat straw like the ox. The nursing child shall play over the hole of the asp, and the weaned child shall put its hand on the adder’s den. They will not hurt or destroy on all my holy mountain; for the earth will be full of the knowledge of the Lord as the waters cover the sea.

(Isaiah 11:6–9)

The Hebrew scriptures are populated with references to the natural world, but no writer employed a skill for turning a memorable phrase like Isaiah. Writers in other religious traditions frequently refer to the environment in ancient texts, as well. The Chinese philosopher Lao Tzu used water as a teachable moment: “The highest good is like that of water. The goodness of water is that it benefits the ten thousand creatures; yet itself does not scramble, but is content with the places that all men disdain. It is this that makes water so near to the Way” (as quoted in Waley, 1997, p. 8).

The Christian theologian Augustine was sitting under a fig tree, in a garden, trying to figure out what to do with his life when he heard from a child the words “tolle, lege; tolle, lege,” which translates to “pick up and read; pick up and read” (or sometimes “take and read”) (Outler, 1955), thus combining communing with nature and literacy. Augustine picks up a copy of the letters of Paul, reads a passage from Romans, has his final conversion, and dedicates his life to God. In this way, Augustine closes a literary and dendrologic circle, in that his metaphoric original sin was stealing a pear from his neighbor’s tree.

Fig trees play multiple roles in ancient texts. In the New Testament, Christ twice mentions figs that do not bear fruit – in Luke 13:6–9 the tree is cut down and burned and in Matthew 21:19 it is cursed. Scholars understand these passages as the fruitless tree representing faith without acts. One Christian tradition proposes that it was a fig tree in the Garden of Eden that tempted Adam and Eve, rather than an apple (many theologians go with the more generic “fruit tree”). It is often the leaves of the fig tree that cover the private parts of Adam and Eve as well as too many Roman statues to count – perhaps as a symbol of carnal lust, or that there are 850 species of fig, or that the common fig’s leaf is largish at 7 inches by 10. The expression “fig leaf” became a metaphor for a token or flimsy cover easily seen through or around.

Of course, cultures with oral traditions, such as those of Native American tribes, passed nature stories down from generation to generation and, sadly, many of those have been lost to time. Trees are clan symbols for many tribes, particularly in the American Southwest. In the Northeast, the birch tree, in addition to providing the flexible, tough material for canoes, dwellings, and baskets, was said to be a gift from the benevolent cultural hero Wenabozho to wrap bodies of the dead and as a hiding place from lightning strikes.

That the ancient texts and oral traditions influenced more modern writers associated with environmentalism (as we have come to call it) is evidenced in the work of Aldo Leopold, author of *A Sand County Almanac* (1949), the most important work on environmental ethics in the 20th century. Twenty-nine years earlier, in a journal article, Leopold examined the connections between the moral obligations of humans toward their surroundings by comparing biblical prophets such as Isaiah with nature-lovers of his generation such as President Theodore Roosevelt and the naturalist, activist, and writer John Muir.
Figure 1.1 “Aldo Leopold examining tamarack at his Sauk County, Wisconsin, retreat.” The biologist and writer Aldo Leopold influenced generations of environmentalists with his posthumously published *A Sand County Almanac* (1949). Leopold was killed fighting a fire on his farm in Sauk County, Wisconsin, in 1948 at age 61.

From the works of Ezekiel, a prophet in the Jewish, Christian, and Islamic traditions, Leopold quoted the following:

Seemeth it a small thing unto you to have fed upon the good pasture, but ye must tread down with your feet the residue of your pasture? And to have drunk of the clear waters, but ye must foul the residue with your feet?

(Ezekiel 24:18)

This, wrote Leopold, is “the doctrine of conservation, from its subjective side, as aptly put as by any forester of this generation” (as quoted in Mazel, 2001, p. 232).

Leopold eventually rejected Roosevelt’s conservationism, which puts the benefit of humans as a core principle, as insufficient. Leopold’s idea of a land ethic, in which nonhuman members of a biotic community should be given ethical considerations, would be adopted by many. The Stoic philosopher Zeno of Citium, writing three centuries before Christ, is considered an important influence: “The aim and object of life is to live in agreement with nature, which is, in other words, to live according to virtue: for this is the goal to which nature conducts us” (as quoted in Pearson, 1891, Chapter 13).

Metaphors aside, modern journalism also employs literary conventions that have been common throughout history. Myths, for example, have repeated themselves over time with remarkable consistency. Journalism scholar Jack Lule (2001) examined this idea in detail throughout the history of the published word and narrowed the themes down to seven “master myths in the news,” one of which was “The Flood.” Lule noted that many cultures around the world retell the story of a great flood, especially if the story is seen to represent other types of tragedy. “The disaster humbles and reminds humans of forces greater than themselves,” wrote Lule (2001, p. 25; Neuzil, 2008, p. 30). In the western and middle eastern worlds, the well-known story of Noah represents one of the ancient versions of this tale. Today, flood reports in newspapers, broadcast outlets, and social media around the world retell a recognizable version of the flood story when the water rises, according to Lule. These are familiar and fundamental stories that help us make sense of our lives.

The surviving ancient texts and their various interpretations, versions, and retellings are not all concerned with religious or spiritual themes when it comes to writing about the natural world. Nearly as numerous, if less influential, were ancient texts dealing with the basics: growing, processing, storing, and eating food. Next, we turn our attention to a select few influential agricultural texts, which began a tradition in writing about agriculture that by the 16th century became known under the umbrella term “natural history” and today we call science.

Agriculture

Pliny the Elder (d. 79 CE) was not a journalist, not in the least because that job did not exist as we know it in the first century, but the ancient Roman writer and thinker possessed one of the qualities that every journalist today needs in abundance – curiosity. It ended up killing him.

The only written words of Pliny that survive today are in Historia Naturalis (Natural History) and it is an impressive piece of work. Historia is an encyclopedia, and it stretches for 37 volumes. More of an aggregator than an originator, Pliny claimed that he used 100 authors and 2,000 books as resources for his work (and 20,000 facts). Among the authors he cites were Aristotle, Diosnius, Hippocrates, Virgil, Cato, and Columella, the latter two of whom we shall discuss in more detail. A main source was the Greek Theophrastus, a disciple of Aristotle and author of Historia Plantarum (Enquiry into Plants), a man considered the father of botany by Carl Linnaeus. Only partial sets of Theophrastus’s work survive. An important predecessor was Varro (d. 27 BCE),
Figure 1.2  “Title page of Pliny’s Natural History, with decorative border of dolphins and illustration of St. Michael lancing dragon.” Pliny the Elder was an encyclopedist in ancient Rome. His multi-volume work, Natural History, has gone through several editions, including this one from 1519, and it sat in the library of many scholars in the Enlightenment period.

a writer of many interests outside of agriculture, including philosophy, language, education, and calendars. His *Disciplinarum libri IX* (*Nine Books of Disciplines*) is considered an important influence on Pliny, not as much for content as for the encyclopedic form, as was Aristotle’s ten-volume *Historia Animalium* (*History of Animals*). (The nine books that comprise *Disciplinarum libri IX* are grammar, rhetoric, logic, arithmetic, geometry, astronomy, musical theory, medicine, and architecture.)

Food and agriculture form a large part of Pliny’s work, as well as observations of wild animals and plants of the region around ancient Rome. There are sections on what we would now consider astronomy, geology, mineralogy, weather, climate, and medicine. There is a long section on art, a valuable resource today for art historians, and Pliny seemed to be particularly fond of bees.

There are themes in the volumes, including erosion and invasive species, that carry forward to the modern era of environmental journalism. The clear-cutting of trees led to problems after heavy rains: “Destructive torrents are generally formed when hills are stripped of trees which formerly confined and absorbed their rains” (Mazel, 2001, p. 9). Invasive species, with the notable exception of African ants, were generally treated with optimism by Pliny, who wrote of the advantages of importing plants from the far reaches of the Roman empire, such as licorice from Russia and sage from Ethiopia. The plane tree (*Plantus orientalis*), for example, came to Rome and then to Greece from the east, “being one of the very first exotic trees that were introduced into Italy” (Pliny, trans. 1942, Vol. 3, p. 103) for its shade. Legend has the species as the Tree of Hippocrates, under which the father of medicine taught, and the Apostle Paul preached.

The books are full of practical advice for the growing, storing, and preparation of food. But the author was also concerned about nutrition, digestion, and taste. “The most wholesome nutriment for man is plain food. An accumulation of flavors is injurious, and still more so, if heightened by sauces. All acrid elements are difficult of digestion, and the same is the case if food is devoured greedily, or in too large quantities. Food is also less easily digested in summer than in winter, and in old age than in youth” (Pliny, trans. 1942, Vol. 3, p. 98). Scholars are divided on translations for some of the fruit he describes — in one case, a tree from India that Pliny called *pala* produced either bananas, pomegranates, or something else entirely.

And this points to a problem with Pliny’s text: much of it is just plain wrong, although often entertainingly so. Part of his work is still with us as myth: porcupines shoot their quills; ears ring when their owners are gossiped about; hair and fingernails grow on a corpse; snakes steal milk from cows’ udders at night (Neuzil, 2008, pp. 38–39). Some creatures have human bodies and the heads of dogs; others have no heads, which is more remarkable than those that have no mouths and take their nourishment by nose.

Nonetheless, people read it, over and again. The work went through almost 60 editions and in medieval Europe, it was a basic reference. Pliny’s books were most likely part of the libraries of Marco Polo, Michel de Montaigne, Shakespeare, John Milton, and Edward Gibbon (Dennis, 1995; Neuzil, 2008, p. 39).

Tragically, Pliny died at the eruption at Mount Vesuvius in 79 CE. His sister had brought the smoking volcano to his attention and he ordered a ship to investigate; his nephew, the author Pliny the Younger, was invited along but declined to stay home to work on a manuscript. The Younger later wrote an account of Pliny the Elder’s death: On the beach at Stabiae, near the volcano “my uncle lay down on a sail that had been spread for him, and called twice for some cold water, which he drank. Then a rush of flame, with the reek of sulfur, made everyone scatter, and made him get up. He stood with the help of his servants, but at once fell down dead, suffocated, as I suppose, by some potent, noxious vapor” (Pliny the Younger, trans. 1963, Letter 6.16).
Cato the Elder (d. 149 BCE) was much referenced by Pliny. One of Cato’s major works that survived the ravages of time was *De Agri Cultura* (variously translated as *On Agriculture*, *On Farming*, or *Concerning the Cultivation of the Field*), which was completed around 160 BCE and is considered the oldest extant work written in Latin. It is not as easy to read as Pliny because of its form and content; it resembles nothing so much as a how-to manual for farmers and could have been titled “In Praise of Farming.” Cato also includes cold-blooded and cruel advice on the handling of slaves — including reducing their rations when they became sick or injured and selling off those that became old or infirm. He was not the only ancient author to do so.

The work, which heavily focused on the development of vineyards, has been credited by scholars as kick-starting the wine trade in ancient Rome (Gately, 2009). Cato writes glowingly of cabbage, both for its nutritional and medicinal benefits: “It is the cabbage which surpasses all other vegetables. It may be eaten either cooked or raw; if you eat it raw, dip it into vinegar. It promotes digestion marvelously and is an excellent laxative, and the urine is wholesome for everything” (Cato, trans. 1966).

While sipping your own urine after a hearty meal of cabbage might not be a modern idea of wholesome nutrition, Cato had sound advice on fertilizer, irrigation, timber cutting, vine grafting, curing ham, and making hay. He recommended a proper matching of crops and soil types. Cato also listed what is thought to be the oldest written account of the making of concrete, to be used for the foundation of his olive presses. His advice would sound familiar to today’s agribusiness operators, all the way down to complaining about bankers and other money-lenders (Neuzil, 2008, pp. 40–41).

Columella (d. 70 CE), a Roman who was born in southern Spain, was a contemporary of Pliny, and there is evidence that they read and referenced each other’s works. His 12-volume production (no one in ancient times wrote a single volume, it seems) called *De Re Rustica* is probably the best of the ancient texts on the subject, although Columella, too, is abusive of slaves. His style is as a book of advice to a friend, rather than the encyclopedias or how-to manuals of Pliny and Cato. One of several memorable passages is: “admire a large farm, but a small one till” (p. 49). Columella is thought to have recorded the first soil test and is notable for his descriptions of the health dangers of fetid and stagnant water.

The list of authors influenced by Columella is as long as it is important. English authors used Columella as a resource on gardening, starting in the 9th century with Walafrid Strabo writing the *Hortulus*. In the 17th century John Milton, in *On Education*, ranked Columella with the Hebrew texts as important for students to study “after evening repast until bed-time.” He thought students should first go to the scriptures and then to “the authors of agriculture, Cato, Varro, and Columella, for the matter is easy; and if the language is difficult, so much the better” (as quoted in Ash, Introduction to *On Agriculture*, 1941, p. xix; Neuzil, 2008, pp. 42–43).

After the time of Milton, it was a short step from writing about farming (a practical application of science) to writing about the natural sciences themselves. Charles Darwin, no farmer he, quoted Columella on domestic fowl in 1868, but Darwin was more interested in a new science, evolution, than planting vineyards or raising chickens (Neuzil, 2008, p. 43).

**Science**

Historians of science debate about the proper beginnings of “modern” science, but certainly a transitional author in the history of writing about science was Georgius Agricola (d. 1555, real name Georg Bauer, a German), a founder of the field of geology. Agricola’s *magnum opus* was *De Re Metallica* (*On the Nature of Metals*), published posthumously in 12 volumes in 1556 and the final word on the mining, smelting, and refining of minerals for the next six or seven
generations. Coming on the heels of the invention of movable metal type by Johannes Gutenberg, Agricola’s work was printed in German, Latin, and Italian and, in 1912, English. (The 1912 edition’s translator was engineer and future US President Herbert Hoover and his wife, Lou Henry Hoover, who was a geologist fluent in Latin.)

In Agricola’s day, science was not clearly defined from other scholarly efforts like philosophy (thus the term “natural philosophy” as a synonym for science was used well into the 19th century) (Neuzil, 2008, p. 53). Agricola’s experiences in the Bohemian community of Jáchymov (in German, Joachimsthal) working in and around the town’s silver mines, and then in nearby Saxony at the processing city of Chemnitz, were primary sources for his book. His main ancient source was Pliny. The thrust of the book was a defense of science – mining was not a matter of luck to Agricola, but success came from education, training, experience, trial, and error. Agricola weaves in important information on law, medicine, and supporting science; he is critical of alchemy and the occult, which were not uncommon subjects in books and lectures of his time.

Beginning with Agricola and Copernicus in the 16th century and gathering steam in the 17th, science evolved as a separate endeavor; the end of the period was known as the age of enlightenment. Men who are now considered giants in the field – Newton, Kepler, Bacon, Boyle, and Galileo among them – found fame through their work in that period. University science curricula and scientific societies sprang up across Europe, and science periodicals began to appear regularly, including proceedings of the various societies. Many of the important, foundational books on mathematics, astronomy, chemistry, and other fields were published during the 18th century as Francis Bacon’s empirical methods came to be de rigueur (Neuzil, 2008, p. 54).

Bacon’s scientific method, based on observation, testing, and inductive reasoning, was best read in his unfinished work Novum Organum (New Instrument), published in 1620. He referenced the Book of Daniel from the Hebrew scriptures as a summary of his ideas: “Many will travel and knowledge will be increased” (Daniel 24:4). Much like Pliny, Bacon (d. 1626) did not claim any original scientific discoveries, truths, or phenomena; he was a methodologist as much as Pliny had written an encyclopedia. Two giants in the field, Isaac Newton (d. 1727) and Robert Boyle (d. 1691), were among the scientists influenced by Bacon and his methods.

The science associations of Europe were to be duplicated in the United States, including the founding of the American Philosophical Society by Benjamin Franklin in 1743. Alexander von Humboldt was a member, as were Charles Darwin, Louis Agassiz, and Louis Pasteur; the APS published Meriwether Lewis and William Clark’s journals and Franklin’s collected papers. By the 1830s, general interest periodicals appeared regularly in the homes of Americans, and the new magazines joined newspapers in publishing stories about science and agriculture to a ready reading public. Soon magazines devoted specifically to farming and science were started. “Agricultural subjects were well-treated in the scientific magazines,” wrote magazine historian Frank Luther Mott, “and in the periodicals of general interest. They had been staple material from the beginning” (1930, p. 152). The American Journal of Science (founded in 1818) and Scientific American (1845) were among the best.

The Prussian scientist Humboldt (d. 1859) is known as much for his explorations as his main scientific interest, if one could be narrowed down: geography. Darwin called him “the greatest scientific traveler who ever lived” (as quoted in Wulf, 2015). He was as productive as he was high mileage – his accounts of travels and observations in Latin America alone went to 34 volumes. His ideas of the earth as a single whole organism, detailed in the 1845 book Cosmos, can be read in Leopold. Humboldt’s biographer, Andrea Wulf, said John Muir considered Humboldt as his spiritual ancestor.

Changes in the postal laws and advances in steam-powered printing presses and leisure time led to an explosion of the magazine industry after the Civil War, and well-remembered names...
such as *Science* and *Popular Science* joined the marketplace. The maturation of the business was established by the 20th century, marked by the creation of the National Association of Science Writers (NASW) in 1934.

In 2017, the British newspaper *The Guardian* ranked a science and environment book, *The Sixth Extinction* (2014) by Elizabeth Kolbert, No. 1, and *Silent Spring* (1962) by Rachel Carson No. 20 in its list of 100 all-time greatest nonfiction books. The legacy of Pliny, Cato, and Columella was secure.

**Nature writing**

Before Humboldt, Darwin, and Muir, there was Gilbert White.

If, as essayist Hamilton Wright Mabie wrote in 1916, the three great themes of literature are God, Man, and Nature, then White (d. 1793), an Anglican priest, surely deserves a place of honor in the nature writing pantheon. His keen observations of wildlife from his rural post in Hampshire in 1789 titled *The Natural History and Antiquities of Selborne* has never been out of print.

His writing could be lyrical. White, after carefully watching birds and *rodentia* eating the nuts from a hazelnut tree, noticed:

> There are three creatures, the squirrel, the field-mouse, and the bird called the nut-hatch (*Sitta europaea*), which live much on hazel-nuts; and yet they open them each in a different way. The first, after rasping off the small end, splits the shell in two with his long fore-teeth, as a man does with his knife; the second nibbles a hole with his teeth, so regular as if drilled with a wimble, and yet so small that one would wonder how the kernel can be extracted through it; while the last picks an irregular ragged hole with its bill; but as this artist has no paws to hold the nut firm while he pierces it, like an adroit workman he fixes it, as it were, in a vice, in some cleft of a tree, or in some crevice; when, standing over it, he perforates the stubborn shell.

*(White, 1789/1876, p. 289)*

He equates this variation in behavior to instinct. Nothing was too small to escape his attention.

> “Earthworms, though in appearance a small and despicable link in the chain of Nature, yet, if lost, would make a lamentable chasm” (p. 234). In addition to food for birds and some mammals, he noted their loosening of soil and the importance of their manure. On common loons: “Every part and proportion of this bird is so incomparably adapted to its mode of life, that in no instance do we see the wisdom of God in the creation to more advantage” (p. 332). White was an important author for the young Darwin and an influence on Charles Lyell, Thomas Henry Huxley, and Herbert Spencer.

By the end of the 19th century, nature writing became established as a popular form of non-fiction. The best writers offered their works in books, often a collection of previously published magazine articles, and the public lapped them up. Any mention of the important authors in the genre is subjective, but usually those 19th-century lists include Henry David Thoreau, John Muir, and John Burroughs. Female authors, who became more prominent in the 20th century, include Mary Hunter Austin, Mabel Osgood Wright, Marjorie Stoneman Douglas, and Terry Tempest Williams. The best of them incorporated science into their observations of the natural world.

That Thoreau (d. 1862) should be mentioned prominently is a given. His masterpiece *Walden* (1854) was considered the single most important work to teach in a course on 19th-century American literature in a 1991 survey of American professors by the Modern Language Association (Buell, 1995, p. 9). It has been only briefly out of print, being one of those books in
American letters that became more influential years after its publication and author's early death at age 44 than at its introduction. However, it should be noted that most reviews at the time, including one from New York publisher and future presidential candidate Horace Greeley, were positive (Harding, 1959).

Based in his cabin on land near Walden Pond owned by his friend Ralph Waldo Emerson, Thoreau hiked in the woods, sought truth in nature, and looked for a way to communicate it (Neuzil, 2008, p. 104). “Sometimes I rambled to pine groves, standing like temples, or like fleets at sea, full-rigged, with wavy boughs, and rippling with light, so soft and green and shady that the Druids would have forsaken their oaks to worship in them” (Thoreau, 1854/2004, p. 195).

His walks would lead him to metaphysical thoughts: “Time is but the stream I go a-fishing in. I drink at it; but while I drink I see the sandy bottom and detect how shallow it is” (p. 97). His text is rich with references to ancient authors from Aeschylus to Xenophanes. Cato the Elder is present, as well as Pliny, Dickens, Shakespeare, Confucius, Aristotle, and many more (Neuzil, 2008, p. 104). And, much as a journalist operates, all of Thoreau’s reflections come from first-hand experiences. Later nature writers, such as Burroughs, in particular, were influenced by Walden and its use of the first-person perspective.

Reading John Burroughs (d. 1921) is like talking with your grandfather. Seeing a photograph of Burroughs is like looking at your grandfather, if he were born in 1837 and spent most of his life raising grapes and making maple syrup. His essays and numerous books, unlike Thoreau, were very popular during his lifetime but have been very nearly forgotten since. He also represents that breed of American author, like Thoreau, who found it his duty to become active in social movements, including the turn-of-the-century conservation movement. Situated mainly in the Northeast, his writing is gentle and heartfelt: “leap and the net will appear” is attributed to him although it is often mistaken for a Buddhist saying.

His first book of nature essays, Wake-Robin, appeared in 1871, to be followed by nearly two dozen others. His readers included Theodore Roosevelt, Henry Ford, Thomas Edison, Harvey Firestone, Jay Gould, Walt Whitman, and many other elites. Burroughs’s friendships with Whitman and Emerson were an important influence on his work in terms of lyrical style and use of spirituality, in this case the transcendentalism that was also a mark of Thoreau. Burroughs’s personal philosophy reflected Thoreau’s, but it was almost always expressed in an appreciation of natural things. “I think it is probable that my books send more people to nature than Thoreau’s do,” he wrote. “My enjoyment is more personal and contagious. I do not take readers to nature to give them a lesson, but to have a good time” (as quoted in Barrus, 1925, p. 336). Part of his legacy is that each year the John Burroughs Medal is awarded to the best book in natural history.

Muir was a friend of Burroughs – he was nicknamed John O’Mountains and Burroughs was John O’Birds – and as a preservationist and Sierra Club founder, he has remained popular with environmentalists since his death in 1914. After some early-life rambles, Muir settled in California in 1868, farming, wood-chopping, and doing odd jobs while he roamed the Sierra Nevada Mountains. One could argue that his political career and organizing, particularly the battles in favor of Yosemite National Park, made Muir at least as famous as his writings, which included letters, essays, children’s stories, and magazine articles as well as books. One of his biographers (Holmes, 1999) was not alone in calling Muir the patron saint of American environmentalism.

It is a mark of a person’s career and fame – see A. von Humboldt – that places get named after said person. Muir got a mountain, a national monument, a college, a peak, two postage stamps, four trails, a mountain pass, a beach, a glacier, and an asteroid. This list leaves out a mineral, three flowers, a butterfly, an insect, a bird, and a mammal.

Mary Hunter Austin (d. 1934) also got a mountain named after her, in the Sierra Nevada range. Her best book is Land of Little Rain (1903), about the Owens Valley in California, which
“John Burroughs in rustic chair.” John Burroughs wrote stories of the natural world with a folksy, familiar touch, beginning in the 1860s. The 1873 publication of his first collection of essays, *Wake-Robin*, was assisted by the poet Walt Whitman, who became a lifelong friend.

Figure 1.4  “Mary Hunter Austin.” Mary Hunter Austin’s book *Land of Little Rain* (1903) is a classic piece of nature writing about the American Southwest. She was a prolific writer, penning novels, poems, plays, and essays as well as her observations of the natural world. Austin was a feminist and staunch defender of Native American rights.

she knew well and wrote of in the first person. She was a very prolific writer, beginning her career in magazines and ending it with a body of work that included 30 books of fiction and nonfiction, and several plays. Her mother warned her of a career as a writer: “You must not quote; especially poetry and Thoreau. An occasional light reference to Burroughs was permissible, but not Thoreau” (as quoted in Stewart, 1995, p. 135). Mom was afraid a writing career for her daughter would scare off suitors, although that did not end up as an issue. Among her journalistic collaborators was the nature photographer Ansel Adams.

Austin and many of her contemporaries produced journalism. Mabel Osgood Wright (d. 1934) was one; she came from a literary family and first came to the public’s attention through a series in the New York Evening Post. (The stories were collected as The Friendship of Nature in 1894.) She wrote many nature books, field guides, and other works, several on the lives of birds, and she was an important figure in what is now the National Audubon Society. She had a political side with a reputation as a conservationist and polite yet firm reformer; many of her ideas on conservationism found a new audience of suburban women.

Marjorie Stoneman Douglas (d. 1998) also came from a media background; her father was the first publisher of the Miami Herald newspaper. She became an assistant editor at the Herald after World War I and authored a popular column. Her important book on the Florida ecosystem was called The Everglades: River of Grass (1947). Hers was a long career (she died at age 108) that included more than a hundred short stories, 40 of which were for the Saturday Evening Post. River of Grass contained the famous line “there are no other Everglades in the world,” and sold out its first printing in a month (Grunwald, 2006, p. 205).

By the end of the 20th century, any gender barrier that existed in the nature writing field was crumbling fast, if not already rubble, thanks to Douglas, Wright, Austin, and others. Among the best of the post-war wave of female nature writers was Terry Tempest Williams, who combined nature and memoir in Refuge: An Unnatural History of Family and Place (1991), an intricate weaving of Mormonism, atomic testing, cancer, and flooding. Annie Dillard, Gretel Ehrlich, Ann Zwinger, Sherry Simpson, and many others found popularity, as well.

Outdoor adventure writing

The realm where women writers were shuttled to the rear was in the outdoor adventure field, the last of our influences on modern environmental journalism. And the man whom modern outdoor adventure writers often cite as the beginning of the genre is also, probably, the last president of the United States to practice taxidermy. But a summary of outdoor adventure writing and how it feeds into and contributes to today’s environmental journalism would not be complete by beginning with Theodore Roosevelt. For that task, we need to travel back to a series of writers, British and American, to find out whom Roosevelt read. We begin in 17th-century England.

Izaak Walton (d. 1683), whose book The Compleat Angler (1915) is among the first significant works in outdoor adventuring, is usually more remembered in literature classes as the inventor of the modern biographic form. But writers like Roosevelt and others took to heart the little book on fish and fishing, first published in 1653. Walton, who lived to be 90, was a perfectionist and incurable editor, revising his book five times. His use of interlocutors, named Piscator (angler), Viator (later Venator, hunter) and Auceps (falconer) was imitated by many later adventure writers, as was his use of composite characters.

The book and its characters were successful because they represented much more than a fish story. There are pastoral and spiritual elements in the text, along with poetry and prose, politics and songs, and even recipes. It contains strong environmental messages that resonate with modern journalists concerning catch-and-release fishing, exotic species, and game laws.
Because of the turbulent nature of British society in Walton’s day – Charles I was dead, the court in exile – his commentary on politics is often subtle, as he supported the monarchy. “No life, my honest scholar, no life so happy and so pleasant as the life of a well-governed angler; for when the lawyer is swallowed up with business, and the statesman is preventing or contriving plots, then we sit on the cowslip-banks, hear the birds sing, and possess ourselves in as much quietness as these silent silver streams, which we now see glide so quietly by us,” he wrote (p. 120). After the Bible and the works of Shakespeare, The Compleat Angler has gone through more editions than any other English-language book (Eschner, 2017).

In American media history, a man with the pen name Frank Forester (real name Henry Herbert) was among the most successful outdoor adventure writers in the mid-19th century. Forester was born in England, which brought comparisons to Walton, and wrote rightly forgotten fiction. His outdoor books, though elegant, tended to be toward the how-to end of the spectrum and less concerned with modern problems. His most famous book was a compilation of magazine articles called The Warwick Woodlands (Forester, 1851) about the sporting life in rural New Jersey. He was not a fan of the city; he believed in the agrarian myth so cherished by writers on 20th-century newspaper outdoor pages, including the idea that progress wasn’t so great: “all the lovely sights and sweet harmonies of nature defaced and drowned by the deformations consequent on a railroad, by the disgusting roar and stench of the steam engine” (p. 13). Nostalgia aside, he set some sort of American record for most frequent use of the exclamation mark.

References to Forester showed up in what is now called hook-and-bullet writing for decades (Neuzil, 2008, p. 79). Among the next generation was “Uncle” Thad Norris, who was closer to Walton in style and content. In fact, Norris was called the American Walton after his American Angler’s Book was first published in 1864. Norris reprinted a few of Walton’s poems at the beginning of some chapters and used interlocutors and composite characters. One character was True Angler, who “thoroughly imbued with the spirit of gentle old Izaak” and fished with no affectation or expectation of success and was modest and straightforward (Norris, 1877, p. 33; Neuzil, 2008, p. 80). Modern problems then and now covered by Norris included roadless areas, fish-limiting high dams, poison runoff from mines, sawdust from mills, tannic acid from leather-makers and their factories, and other industrial pollutants. Fish stocking (to improve the angling) was a particular concern. Many of these stories were to find frequent homes in the portfolios of outdoor writers and environmental journalists in the next century (Neuzil, 2008, p. 80).

Other outdoor writers who enjoyed popularity after the Civil War included Charles Hallock, George Bird Grinnell, and the hunting writer Theodore S. Van Dyke. Hallock and Grinnell edited the most popular outdoor magazine of the period, Forest and Stream. Among their star writers was George Washington Sears, writing under the name Nessmuk, as canoe editor. The rough edges of urban life and the consequences of the industrial age were never far from the surface of any of the outdoor adventure writers. “We are an overworked nation; that our hair turns gray 10 years earlier than the Englishman,” Nessmuk wrote (1884, p. 1). Social concerns that would be familiar to modern readers were present on a camping trip: “A huge tannery, six miles above Poplar Spring, poisons and blackens the stream with chemicals, bark and ooze. The land has been brought into the market, and every acre eagerly bought up by actual settlers. . . . Of course this is progress, but whether backwards or forwards, had better be decided 60 years hence . . . It is the same old story of grab and greed,” he wrote (pp. 89–90). The year was 1860.

Women were not completely absent. Forest and Stream introduced a “letter to the ladies” feature in 1873 and hired six regular female contributors over the next year (Jones, 2015). The women who published accounts of their experiences ranged from upper-class British adventurers such as Isabella Bird (who did not hunt) to spouses of American elites such as Grace Gallatin Thompson Seton (wife of naturalist Ernest Thompson Seton). Homesteading and pioneering
women wrote of their experiences for newspapers and magazines, as represented by Evelyn Cameron’s work in the *New York Sun* and Elinor Pruitt Stewart in the *Atlantic Monthly*. The outdoor writer Agnes Morely Cleaveland’s autobiography (1941) was titled *No Life For A Lady*.

Roosevelt was rightly called “the father of American conservation” but his early writing on the outdoors is often overlooked. Prior to his involvement in national politics, his work on his ranch and the vigorous life in the Dakota Territory appeared in a large circulation magazine before it became a popular book trilogy; he continued to write of his adventures even after he left the White House in 1909. The first of the three books in the Dakota trilogy, *Hunting Trips of a Ranchman* (1885), “could claim an honorable place on the same shelf as Walton’s *Compleat Angler,*” said the British magazine *Spectator* (p. 82). “His influence on American outdoor writing was never surpassed,” wrote one author (Schullery, 1985, p. 1).

TR thought less of Forester than many of his contemporaries; Burroughs was the president’s favorite. In 1887, George Bird Grinnell and Roosevelt cofounded the Boone and Crockett Club, along with J. P. Morgan, Henry Cabot Lodge, Elihu Root, and Madison Grant. This partnership of editor, writer/politician, and environmental organization continued into the next century. “One of the chief attractions of the life of the wilderness,” Roosevelt (1893) wrote in *The Wilderness Hunter*, “is its rugged and stalwart democracy; there every man stands for what he actually is, and can show himself to be” (p. 270).

Environmental journalism goes mainstream

Journalists who thought of themselves as simply reporters produced what today looks a lot like environmental journalism through the early and middle decades of the 20th century. Among the stories that got prominent attention were the Alaskan Land Fraud controversy that nagged at the presidency of William Howard Taft, workplace accidents and poisoning in mines and tunnels, smog and pollution in cities such as St. Louis and Pittsburgh, and federal land use and abuse.

As the streams of science, nature, and outdoor adventure writing followed ancient spiritual texts and agriculture manuals and wove in and out of each other throughout the 20th century, ideas about the environment as an area for reportage, including continuous coverage by newspapers, magazines, and broadcast outlets, began to take shape. The maturation of outdoor adventure writing and science journalism is evident in the establishment of professional associations concerned with the fields. In 1927 outdoor journalists founded an organization for writers and editors; the Outdoor Writers Association of America (OWAA) became the largest and most important trade association for hook-and-bullet journalists (Neuzil, 2008, p. 89). Science writers for newspapers and magazines began talking about forming an association in 1934 at a meeting in New York, when 12 journalists founded the National Association of Science Writers (NASW), which was formally incorporated in 1955 (Neuzil, 2008, p. 61).

Nature writing has always been treated more seriously by critics than either science, agricultural, or outdoor adventure writing, and as such found a home in academia rather than in a loose association of professionals. The Association for the Study of Literature and the Environment (ASLE) was founded in 1992 by both scholars and writers. On the flip side, by then journalists specializing in farming and agriculture found an indifferent or even hostile environment at major newspapers. In 2001 Thomas Pawlick’s book *The Invisible Farm* was subtitled *The Worldwide Decline in Farm News and Agricultural Journalism Training* and summed up the sorry shape of the field.

The creation of regularly assigned stories, called a beat, on the topic of environmentalism followed the American public’s interest in the 1960s. Only one journalist was identified as a “specialist” environmental reporter by an *Editor & Publisher* survey in 1968 (DeMott & Tom, 2008, p. 61).
Development of environmental journalism in the West

But dramatic events such as the publication of Carson’s *Silent Spring* (1962), the Santa Barbara oil spill (1969), the Cuyahoga River fire (1969), the first Earth Day (1970), and the famous “blue marble” photograph of the Earth from an Apollo astronaut on the moon (1972) led to increased media interest.

By the late 1970s, with stories of disasters at Love Canal and Three Mile Island and, into the 1980s, Times Beach, Bhopal, Chernobyl, and in Alaska aboard the *Exxon Valdez*, the environment as a beat matured. *Time* magazine, departing from its tradition of picking a person, selected the Earth as “Planet of the Year” in 1988. Publications that had previously ignored environmental coverage devoted staff to the topic; some newspapers added a daily page for environment and science stories; local television stations created environmental teams, and PBS ran a ten-part series called *Race to Save the Planet* in 1990.

By the end of the 1980s, several environmental reporters began talking about a professional association based on the models already in place for science and outdoor adventure writers. The Society of Environmental Journalists was officially launched with a big push from Scripps-Howard executive David Stolberg, who had lobbied for the idea for years and found a receptive audience in the winners of a journalism contest, the Edward J. Meeman Awards for environmental reporting. “I always believed in the value of networking,” Stolberg recalled, “of the subliminal training that comes from an association with one’s peers” (Palen, 1999, p. 159; Neuzil, 2008, p. 197).

Stolberg convinced 19 journalists to meet in Washington, DC, in December 1989 at the offices of the Environmental Health Center of the National Safety Council. In February 1990 a board of directors was elected, and Jim Detjen of the *Philadelphia Inquirer* was named the first president of SEJ. There were 161 charter members. A newsletter, *SEJournal*, was created shortly thereafter, and the first national conference of environmental journalists was held in Boulder, Colorado, in 1991 (Neuzil, 2008, pp. 197–198). By the end of the decade, membership was well over 1,200.

The downturn in the media business in the early 2000s affected environmental journalism as much as, if not more than, other areas. Newspapers laid off expert reporters and editors; special sections or columns devoted to the environment were ended. Freelancers, once a small component of SEJ membership, became the largest single group of journalists in the organization. Broadcast news, never a major source of environmental stories, nearly gave up its coverage altogether, with a few exceptions in local markets.

But the journalism lives on, often in different forms. Among the consequences of the media downturn, as we have seen, were start-up websites such as *InsideClimate News* that specialized in environmental journalism. The public radio program *Living on Earth*, which began in 1991, continued to produce quality journalism and found a new, younger audience with its podcasts. Outlets such as *Grist* filled slots in the marketplace by shedding the old mainstream objectivity formula practiced by most newspapers and were unapologetically pro-environment. Environmental bloggers became popular in the early 2000s, to be superseded by podcasters, Instagram photographers, Twitter experts, and other social media experts. And some mainstream newspapers, notably Britain’s *The Guardian*, continued to employ an environmental reporter and devote a section on its website to the topic.

A common thread running through the new media landscape was a departure from the conventional objective role of the journalist. Facebook users, web-based environmental magazines, YouTube producers, and others usually wrote for social media with a point of view. The traditional standards of journalism – in place for most of the 20th century, if not longer – were in flux. In this way, American journalists and those who were producing journalism were catching up (or falling back to) the rest of the world, which gave up on or never ascribed to objectivity
in the first place. Environmental journalism has continued to ebb and flow, from its beginnings in Pliny the Elder and Izaak Walton through Henry David Thoreau and Rachel Carson to the beat system and social media. Continuity comes from the journalists who navigate the stream and tell the stories of the interaction of humans and their environment (Neuzil, 2008, p. 233).

References


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