

Foreword

Since the last edition of *The Environmental Debate* was published in 2011, controversy over environmental issues has intensified. Air and water pollution, waste disposal, alternative energy sources, and climate change continue to be debated with urgency. This new edition brings current a wide range of environmental issues, from biotechnology to the environmental impact of the American diet. Most importantly, it addresses those topics that are causing the most controversy – global warming, clean power, and the U.S. withdrawal in 2017 from the Paris Accords on climate change.

Primary Documents

This work contains 185 primary documents arranged chronologically from Biblical times to the present, including 17 new documents, many reprinted in their entirety. All documents include an informative introduction that includes biographical information about the document's author, the evolution of thinking regarding the specific environmental issue being discussed, and relevant historical context crucial to the understanding of the specific environmental challenges the document focuses on. The text is extensively cross-referenced to help compare and contrast opinions and goals from one time to another. Each document includes complete citations, making additional research easy and quick.

Documents include diaries of explorers, letters from politicians, relevant fictional excerpts, speeches of scientists, environmentalists and politicians, court cases, and laws passed, and are arranged in the following eight parts, each with a lengthy introduction that includes the historical context crucial for understanding the specific environmental challenges of the time:

1. Foundations of American Environmental Thought and Action
2. Politicians, Naturalists, and Artists in the New Nations, 1776–1839
3. The Origins of Environmental Activism, 1840–1889
4. The Roots of the Conservation Movement, 1890–1919
5. Rethinking our Relationship to Nature, 1920–1959
6. The Heyday of the Environmental Movement, 1960–1979

7. Confronting Economic and Social Realities, 1980–1999
8. Politicizing the Environmental Debate, 2000–2017

Special Features

In addition to 185 carefully selected primary documents, *The Environmental Debate* includes the following useful sections:

- **General Introduction** – a clear, detailed view of the often-complicated environmental issues that are the subject of the primary documents. In 11 pages, it addresses the following major categories:
 - Population
 - Land Use and Property Rights
 - Water Availability and Quality
 - Energy
 - Air Quality, Climate Change, and Atmospheric Issues
 - Waste Production and Disposal
 - Toxic Chemicals and Radioactive Waste and Their Disposal
 - Forests, Wilderness, and Wildlife
 - Fisheries, Oceans, and Aquatic Life
 - The Loss of Biodiversity
 - The Complexity of Environmental Issues
- **Appendix I – Significant Dates in American Environmental History**
This timeline includes discoveries, inventions, court cases, legislation, and world events. It starts with the 1626 ordinance passed by the Plymouth Colony regulating the cutting and selling of timber, and ends with the 2017 withdrawal of the United States, by President Trump, from the Paris Accords on climate change.
- **Appendix II – Major International Environmental Organizations**
This section includes detailed listings of the most significant organizations around the world that are involved with environmental decisions, from Clean Water Network to the World Wildlife Fund. It has been updated for this edition to include worldwide groups.
- **Glossary**
The Glossary includes 90 terms – scientific, legal, and political. It includes terms that are frequently heard, like Acid Rain and Fracking, as well as those not as common, like Biota and Environmental Justice.
- **Further Reading**
This list of more than 100 books and articles is designed to deepen the reader’s understanding of any given aspect of the environmental debate.
- **Notes, Copyright Acknowledgments, Index**
These final sections provide sources, citations, and helpful ways for readers to find the exact information they are looking for.

Note: Peninah Neimark and Peter Mott together developed the first two editions of *The Environmental Debate*. Grey House Publishing is grateful to both editors for their combined expertise. Presently retired for many years, Peter Mott did not contribute to this third edition, and we thank Peninnah Neimark for continuing this important work.

DOCUMENT 3: Christopher Columbus Inventories the New World's Natural Resources (1493)

In this letter to Luis de Santangel, comptroller of the treasury of King Ferdinand and Queen Isabella of Spain, Columbus describes the riches of the Caribbean islands he has discovered, and extols the opportunities for the exploitation of their abundant resources. To Columbus, Jean Ribaut [see Document 4], and other early explorers, the "New World's" resources appeared to be limitless, and for more than three centuries most Americans believed that this was indeed the case.

I discovered many islands inhabited by people without number, and of which I took possession for their Highnesses by proclamation with the royal banner displayed, no one offering any contradiction. . . . All these countries are of surpassing excellence, and in particular *Juana*, which contains abundance of fine harbours, excelling any in Christendom, as also many large and beautiful rivers. The land is high and exhibits chains of tall mountains which seems to reach to the skies, and surpass beyond comparison the isle of *Cetrefrey*. . . . They are accessible in every part, and covered with a vast variety of lofty trees, which it appears to me, never lose their foliage, as we found them fair and verdant as in May in Spain. Some were covered with blossoms, some with fruit, and others in different stages, according to their nature. The nightingale and a thousand other sorts of birds were singing in the month of November wherever I went. There are palm-trees in these countries, of six or eight sorts, which are surprising to see, on account of their diversity from ours, but indeed, this is the case with respect to the other trees, as well as the fruits and weeds. Beautiful forests of pines are likewise found, and fields of vast extent. Here is also honey, and fruits of a thousand

sorts, and birds of every variety. The lands contain mines of metals, and inhabitants without number. The island of Espanola is pre-eminent in beauty and excellence, offering to the sight the most enchanting view of mountains, plains, rich fields for cultivation, and pastures for flocks of all sorts, with situations for towns and settlements. . . . The preference [among the islands discovered] must be given to Espanola, on account of the mines of gold which it possesses, and the facilities it offers for trade with the continent, and countries this side, and beyond that of the Great Cau, which traffic will be great and profitable. . . . At present there are within reach, spices and cotton to as great an amount as they can desire, aloe in as great abundance, and equal store of mastick, a production nowhere else found except in Greece and the island of Scio, where it is sold at such a price as the possessors choose. To these may be added slaves, as numerous as may be wished for. Besides I have as I think, discovered rhubarb and cinnamon, and expect countless other things of value will be found.

Source: Christopher Columbus, *Personal Narrative of the First Voyage of Columbus to America* (Boston: T. B. Wait, 1827), pp. 253, 255-56, 260, and 263.

DOCUMENT 4: Jean Ribaut Discovers the Natural Abundance of Terra Florida (1563)

Like other explorers and colonizers both before and after him, Jean Ribaut, a captain in the French navy who established a colony at what is now Port Royal, South Carolina, sought to claim and exploit as much territory as possible for the nation under whose flag he sailed. Greatly impressed by the riches of the “New World,” he depicted it as a paradise abounding in honey and venison and made note of the many plants cultivated by the Indians that were unknown in Europe.

We entered and viewed the countrey thereabouts, which is the fairest, fruitfullest, & pleasanter of all the worlde, abounding in honye, venison, wylde foule, forests, woods of all sorts, Palme trees, Cypres & Cedres, Bayes the highest & greatest, with also the fairest vines in all the world, with Grapes according, which without naturalle arte & without mans helpe or trimming wil growe to toppes of Oks, & other trees that be of wonderfull greatnesse and heyght. And the syght of the fayre Medowes is a pleasure not able to be expressed with tongue: full of Hernes, Curlues, Bitters, Mallardes, Egreyths, Wodkockes, & all other kynde of small byrdes: With Hartes, Hyndes, Buckes, wylde Swine, & all other kyndes wylde brathes, as we perceyved well bothe by theyr footing there, & also afterwards in other places, by theyr crye & roryng in the nyght.

Also there be Connies & Hares: Silke wormes in mervelous number, a great dell fairer & better then be our silk wormes. To be short, it is a

thing unspeakable to consider the thinges that be seene there, & shalbe found more & more in this incomparable lande, whiche never yet broken with ploughe was [but] bryngs forthe all things according to its first nature, wherewith the eternal God endowed it. About theyr houses they [the Indians] labour & tyll the grounde, sowyng theyr fields with a grayne called Mahis, whereof they make theyr meale: & in theyr Gardens they plant beanes, gourdes, cucumbers, citrons, peason & many other fruites & rootes unknown unto us. Their spades: mattocks made of wood, so well & fitly as is possible: which they make wyth certayn stones, oyster shells & muscles, wherewith also they make theyr bowes & small launces: & cutte & polyshe all sortes of Wood, that they imploye aboute theyr buildings, & necessarie use: There groweth also manye Walnut trees, Hasell trees, Cheritrees, very fayre and great.

*Source: Jean Ribaut, *The Whole and True Discovereye of Terra Florida*, trans. Thomas Hacket (London: Rouland Hall, 1563), unfolioed.*

DOCUMENT 5: Baltasar de Obregon's Account of the Riches of New Mexico (1584)

In the latter part of the sixteenth century, Spaniards who were based in Mexico made several expeditions to the lands of the Pueblo Indians. The Chamuscado-Rodriguez expedition of 1582, mentioned in this document, was one the most important of these ventures. Although the primary object of these forays was to find gold, silver, and copper and to record the locations of mines, the expedition reports also detailed how the Indians interacted with their environment and evaluated the potential for introducing European crops and domesticated animals.

Blankets; salines; mats; pottery; Castile flax and linen

The natives gather quantities of corn, beans, calabashes, cotton, and *piciete*, a very useful herb. They make large numbers of blankets,

both heavy and light, beautifully woven and dyed with various bright colors. They possess numerous turkeys. They utilize the feathers, interweaving them in heavy cotton blankets.

They have quantities of salines of rich salt. There are salt deposits that extend over five leagues. They have large numbers of mats made of rushes and reeds, and large and small baskets. They possess good crockery, both heavy and fine, brilliantly decorated with admirable colors. They grow Castile flax without cultivation. It flourishes naturally at Cieneguilla and the Valle de los Valientes [Rio Grande]. Consequently they make Castile cloth.

Number of cattle; wool used for cloth; nature of the land

. . . Thirty or forty leagues away are numerous cattle which they utilize; the meat for food and the hides for many purposes like the hides of the cattle of Spain. They use their wool for clothing, the fat for candles and other things. The hides are good for making shoes and weapons

when very well tanned. These provinces and towns mentioned have a fine climate, numerous plains, valleys, mountains, rivers, streams, lakes, springs and riverbanks, suitable for the cultivation of any kind of grain from Spain and for raising all sorts of cattle.

. . . There are many sierras on its confines where I saw and examined rich metals when I was on the expedition with General Francisco de Ibarra. In the ridges of these mountains and near the settlements are the mines discovered and inspected by Francisco Sanchez Chamuscado and his companions.

Source: Baltasar de Obregon, Obregon's History of 16th Century Explorations in Western America entitled Chronicle, Commentary, or Relation of the Ancient and Modern Discoveries in New Spain and New Mexico, trans. and ed. George P. Hammond and Agapito Rey (Los Angeles: Wetzel, 1928), pp. 300-301.

DOCUMENT 6: Thomas Hariot on the Death of Indians from a Disease Brought from Europe (1588)

In 1585 the Oxford mathematician Thomas Hariot accompanied Sir Walter Raleigh on his voyage to the "New World" to set up a colony to be named Virginia, in honor of England's virgin queen, Elizabeth. Hariot's main duties were to observe the customs of the Indians and to make an accounting of the natural resources in their lands. Like Ribaut [see Document 4], he was greatly impressed by the abundance of resources. His account details one of the unintended consequences of the European contact with the native Americans; the decimation of a large segment of the indigenous population as a result of "virgin soil epidemics"—the very rapid spread of pathogens among populations encountering them for the first time. Because Hariot provides no description of the disease that brought death to the Indians with whom his expedition came in contact, other than to note that it had an incubation period of a few days, it is impossible to identify the disease. It could have been smallpox, typhus, or any of a number of other ailments.

One other rare and strange accident, leaving others, will I mention before I ende, which mooved the whole countrey that either knew or hearde of us, to have us in wonderfull admiration.

There was no towne where we had any subtil devise practiced against us, we leaving it unpunished or not revenged (because wee sought by all meanes possible to win them by gentlenesse) but that within a few dayes after our departure from everie such towne, the people began to die very fast, and many in short space; in some townes

about twentie, in some fourtie, in some sixtie, & in one sixe score, which in trueth was very manie in respect of their numbers. This happened in no place that wee could learne but where wee had bene, where they used some practise against us, and after such time; The disease also so strange, that they neither knew what it was, nor how to cure it; the like by report of the oldest men in the countrey never happened before, time out of minde. A thing specially observed by us as also by the naturall inhabitants themselves.

Insomuch that when some of the inhabitants which were our friends & especially the *Wiroans Wingina* had observed such effects in foure or five townes to follow their wicked practises, they were perswaded that it was the worke of our God through our meanes, and that wee by him might kil and slai whom wee would without weapons and not come neere them.

* * *

[S]ome people could not tel whether to think us gods or men, and the rather because that all the space of their sicknesse, there was no man of ours knowne to die, or that was specially sicke.

Source: Thomas Hariot, *Narrative of the First English Plantation* (London: Quaritch, 1893; reprint of 1590 edition), p. 41, 42.

DOCUMENT 7: William Bradford on Life in the Wilderness (1620, 1621)

Together with a group of fellow Pilgrims, William Bradford sailed from England in search of religious freedom and intent on missionizing the Indians. Their destination was the Massachusetts coast, which had been explored by expeditions led by Captain Bartholomew Gosnold, in 1602, and Captain John Smith, in 1614. They reached Cape Cod in November 1620, and by the following April many members of the party were ill. Although disdainful of the natives, the Pilgrims would have died of starvation if they had not obtained food from the Pautuxet Indians to make it through the harsh winter and if, in the spring, the Indians had not provided them with seed that was suitable for the Massachusetts soil and climate as well as advice on how to plant it. In this selection, Bradford expresses the fear and distaste for the wilderness that was prevalent among the Pilgrims.

Sept: 6 [1620]

. . . [A]fter longe beating at sea they [the Pilgrims] fell with that land which is called Cape Cod; the which being made and certainly knowne to be it, they were not a litle joyfull. . . . And the next day they gott into the Cape-harbor wher they ridd in saftie.

. . .

Being thus passed the vast ocean, and a sea of troubles before in their preparation . . . , they had now no freinds to wellcome them, nor inns to entertaine or refresh their weatherbeaten bodys, no houses or much less townes to repaire too, to seeke for succoure. It is recorded in scripture as a mercie to the apostle and his shipwraked company, that the barbarians shewed them no smale kindnes in refreshing them, but these savage barbarians, when they mette with them (as after will appeare) were readier to fill their sids full of arrows than otherwise. And for the season it was winter, and they that know the winters of that cuntrie know them to be sharp and violent, and subjecte to cruell and feirce stormes, deangerous to travill to known places, much more to serch

an unknown coast. Besides, what could they see but a hidious and desolate wildernes, full of wild beasts and willd men? and what multitude ther might be of them they knew not. Nether could they, as it were, goe up to the tope of Pisgah, to vew from this wildernes a more goodly cuntrie to feed their hops; for which way soever they turnd their eys (save upward to the heavens) they could have litle solace or content in respecte of any outward objects. For summer being done, all things stand upon them with a wetherbeaten face; and the whole cuntrie, full of woods and thickets, represented a wild and savage heiw.

* * *

Being thus arrived at Cap-Cod the 11. of November, and necessitie calling them to looke out a place for habitation, (as well as the maisters and mariners importunitie) they having brought a large shalop with them out of England, stowed in quarters in the ship, they now got her out and sett their carpenters to worke to trime her up.

. . .

After . . . the shalop being got ready, they set out againe for the better discovery of this place, and the m^r of the ship desired to goe him selfe, so ther went some 30. Men, but found it to be no harbor for ships but only for boats; ther was allso found 2. of their houses covered with matts, and sundrie of their implements in them, but the people were rune away and could not be seen; also ther was found more of their corne, and of their beans of various collours. The corne and beans they brought away, purposing to give them full satisfaction when they should meete with any of them (as about some 6. months afterward they did, to their good contente). And here is to be noted a spetiall providence of God, and a great mercie to this poore people, that hear they gott seed to plant them corne the next year, or els they might have starved, for they had none, nor any liklyhood to get any till the season had beene past (as the sequell did manyfest). Neither is it lickly they had had this, if the first viage had not been made, for the ground was now all covered with snow, and hard frozen. But the Lord is never wanting unto his in their greatest needs; let his holy name have all the praise.

. . .

Anno. 1691

. . . [T]he 14. of Jan: the house which they had made for a general randevoze by casulty fell afire, and some were faine to retire aboard [the ship] for shilter. Then the sickness begane to fall sore amongst them, and the weather so bad as they could not make much sooner any dispatch. . . .

Afterwards they (as many as were able) began to plant ther corne, in which servise [the Indian] Squanto stood them in great stead, showing them both the maner how to set it, and after how to dress and tend it. Also, he tould them excepte they gott fish and set with it (in these old grounds) it would come to nothing, and he showed them that in the middle of Aprill they should have store enough come up the brooke, by which they begane to build, and taught them how to take it, and where to get other provisions necessary for them; all which they found true by triall and experience.⁶ Some English seed they sew, as wheat and pease, but it came not to good, eather by the badnes of the seed, or latenes of the season, or both, or some other defecte.

Source: William Bradford, *History of Plymouth Plantation 1606-1646*, ed. William T. Davis (New York: Scribner's, 1908), pp. 94-96, 100, 115-16.

DOCUMENT 8: Francis Bacon on Science and Technology (1629)

The English statesman, essayist, and philosopher-scientist Francis Bacon established the concept of scientific rationality. He asserted that nature is a machine with no inherent value and proposed that human knowledge should be used to improve on nature and adapt it to human needs. The advancement of technology, Bacon thought, would bring benefit to humans without any negative impacts. Although faith in human innovation would continue to be wide-spread, the negative effects of technology were already evident during the Industrial Revolution. By the end of World War II, recognition of the destructive potential of technology had forced people to reexamine the relationship of humans, nature, and technology [see Documents 87, 88 and 91].

LXXXI. . . . [T]he real and legitimate goal of the sciences is the endowment of human life with new inventions and riches.

CXXIX. . . . [T]he introduction of great inventions appears one of the most distinguished of human actions, and the ancients so considered it; for they assigned divine honors to

the authors of inventions, but only heroic honors to those who displayed civil merit (such as the founders of cities and empires, legislators, the deliverers of the country from lasting misfortunes, the quellers of tyrants, and the like). And if anyone rightly compare them, he will find the judgment of antiquity to be correct;

Appendix I: Significant Dates in American Environmental History

The following list includes important events in environmental history as well as precedent-setting state and federal legislation. It also includes significant bilateral and multilateral treaties, declarations, protocols, and conventions to which the United States is a party, some of which have not been ratified by the U.S. Senate. The dates for the treaties and conventions are those when the agreements were opened for signature.

- | | |
|-----------|--|
| 1626 | Plymouth Colony passes ordinance regulating cutting and selling of timber. |
| 1637 | Plymouth Colony passes ordinance regulating herring run. |
| 1639 | Newport, Rhode Island, prohibits deer hunting for six months of the year. |
| 1681 | William Penn, proprietor of Pennsylvania, requires that one acre of land be left forested for every five acres of land cleared. |
| 1691 | Charter renewal for Massachusetts Bay Colony establishes Broad Arrow Policy, setting aside large trees suitable for ship masts by marking them with a “broad arrow.” |
| 1743 | American Philosophical Society formed to promote useful knowledge and encourage scientific agriculture. |
| 1790 | First U.S. Census: population 3,929,627, with over 90% engaged in agriculture. |
| 1804-1806 | Lewis and Clark expedition undertakes first federal survey of nation’s resources. |
| 1807 | Lead Mine Leasing Act establishes policy of leasing mineral rights; repealed in 1847. |
| 1817 | Forest Preserve Act establishes first federal forest. |
| 1818 | Bird Protection Law, Commonwealth of Massachusetts |

Appendix II: Major Conservation and Environmental Organizations

There are thousands of international, national, regional, statewide, and local environmental organizations. Some focus on a single issue in a particular area, such as land conservancy in just one part of a county, while others have a very broad scope of interest. Following is a brief list of some of the most influential national environmental organizations.

Appalachian Mountain Club

Founded 1876, the Appalachian Mountain Club promotes outdoors activities, including hiking, biking, camping, and canoeing, maintains trails, and advocates for conservation in the eastern United States, from Maine to the District of Columbia.

Clean Water Network

cwnheadquarters@cleanwaternetnetwork.org
www.cleanwaternetnetwork.org

Clean Water Network is a coalition of public interest organizations that works to encourage the implementation and strengthening of federal clean water and wetlands policy and law.

Defenders of Wildlife

defenders@mail.defenders.org
www.defenders.org

Defenders of Wildlife works to protect native wild animals and plants and their habitats.

Earth First!

greg7@earthfirst.org
www.earthfirst.org