



Women in the Environment



Educational materials and resources that focus on the contribution women have made to the study and protection of our environment from the past to the present.



The Department of Energy and Environmental Protection's, DEEP, mission is conserving, protecting, and improving the natural resources and environment of our state. DEEP is responsible for monitoring and regulating water, air, and land pollution in order to protect the health, safety, and welfare of the people of Connecticut and to preserve and enhance the quality of life for future generations. By looking at the past we can plan for the future.

This activity packet provides you with the tools and information to research advances women have made in environmental sciences and the roles they have played as leaders. The early stigma of women not being able to master sciences has lasted well into the 20th century. However, there were early pioneers researching, recording and physically advancing the natural sciences and the role of conservation and environmental health. Today, women are found in all areas of study from the field to the laboratory. They are involved in policy making, education and enforcement throughout the world. This packet is a starting point for all students to investigate the past, present and future roles women play in the protection and understanding of our natural resources and serve as role models for future generations.

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Activity 1: Pre-assessment Questionnaire

PROCEDURE

Supply each student with a questionnaire sheet to complete before they start any of their research and before you put up the bulletin board. This is to see what they know and how they feel about women in environmental positions. Have students complete the questionnaire for homework and use it as a discussion tool.

Class Discussion

1. Select a student to be the recorder for the class. The recorder will compile names listed by the class for the first and second questions from the questionnaire on the board. You may need to start them off with an example.
2. For the remaining questions, allow the class to have an open discussion of their findings and opinions. The student recorder will write down general ideas or feelings that the class verbalizes. Follow up the discussion of questions three and four with an outline of how to gather more information and collect additional names. This will help you set the format for conducting research. While discussing this question, ask the class to express any feelings they may have on their findings. This will be the focal point of review when research and presentations are finished or when the time line is completed.
3. Discuss answers for questions five and six and record the students' responses.
4. Have the student recorder transfer the answers from the board to a final document. This will be used for the evaluation process following research to see if any preconceived opinions have changed.

Pre-assessment Questionnaire

Student Name _____

Answer the following questions to the best of your ability. This is to see what you already know about the topic of study, *Women in the Environment*. There are no right or wrong answers.

1. List the names of men, first and last name, if possible, who have contributed to environmental protection or understanding through research, conservation, writings, or activism.
2. List the names of women, first and last, who have contributed to environmental protection or understanding through research, conservation, writings, or activism.
3. For which group was it easier for you to develop a list of names?
4. Why was it easier to come up with names for one group? Are there more men or women involved with environmental studies?
5. When do you think women became involved with the study of sciences and conservation?
6. What would a person have to do in order to be included in the category of environmentalist or conservationist?

Activity 2: Bulletin Board/Reports and Research

Included in this packet are photos and short biographies of several women who have contributed to the study of the environment or have worked to promote conservation of resources. Copy these summaries and display on a bulletin board along with the pictures. Include the caption, "Who Else Could Go Here?" This question will serve as the basis for research on these and other women who have had an environmental impact. A list of additional names has been included below to provide you with research options.

After setting up the bulletin board, explain that these and other women have been involved in the study of sciences, health, and environment for many years. Students will be assigned a woman to research. In their research they are to address these questions:

1. In what area of environmental activity was the woman involved?
2. How did she contribute to environmental awareness and action?
3. What challenges did she encounter in her life and work?

4. What impact did she have then and how does it affect us today?
5. What present day activities resulted from or were advanced due to her work?

Encourage students to locate a picture of the woman being researched to be included in the bulletin board display. They will report their findings as a presentation to the class. The final write-up can be presented as a formal report or in an abbreviated format similar to that used in this booklet.

Extension Idea

This activity can be made into a portfolio and carried out in cooperative groups to reduce the number of reports generated. Portfolios should require students to produce a biographical timeline, a written report of the person's life, a photograph of the person, a bibliography, and a student-generated word search or crossword puzzle using highlights and terms produced through research.

Women To Research

Alice McClosky
Ann LaBastille
Barbara Mikulski
Barbara Ward Jackson
Beatrix Potter
Bev Doolittle
Carolyn Merchant
Cathy Sneed Marcum
Dian Fossei
Elizabeth Dodson Gray
Eva L. Gordon
Gaura Devi
Georgia O'Keeffe

Helen Ross Russell
Harriet Hemenway
Irene Pepperberg
Ivette Perfecto
Jane Goodall
Jolene Unsoeld
Karen Warren
L. Hunter Lovins
Margaret Murie
Margaret Stewart
Mary Austin
May Theilgaard Watts
Nicole Duplaix

Nancy Sutley
Peggy Shephard
Rosemary Grant
Sally Carrighar
Sheila Link
Susan Griffin
Virginia Eifert
Willa Cather

(This list does not contain the names of the women provided in this publication. You may add them to the list as well if not displaying in the classroom.)

Activity 3: Local Women in the Community

The involvement and contribution women have made to the study of our natural resources and environmental protection has greatly expanded. Use the following activity as an extension to student research of the past. This is designed to provide current information about local women involved in research, education, writing, and public policy making for today.

Procedure

1. Using the internet, town guides, and/or the phone book, identify local government, non-profits, and businesses that serve some form of environmental stewardship. Compile this list on the board for students to record in their notes.
2. Have students identify which sector of environmental stewardship they are interested in learning about.
3. Student will contact professionals serving in their area of interest, preferably women, and interview them on their positions. Include the following questions to be asked of all people interviewed.

- A. How did you become interested in this profession?
- B. What educational background do you have for this profession?
- C. Were many women involved in this area when you started compared to now?
- D. Was it difficult for you to enter this field?

4. Have the students develop five more questions to ask in the interview that directly relate to the profession and its impact on environmental protection and quality.
5. Students will then present these interviews as an oral report to the class. Their presentation can be altered from a written report to the form of a play or biographical story about the person. This will allow students to dress appropriate to the profession's requirements and use props vital to the work. i.e. Forester— calipers, tree identification key, wood samples, ...

Closure

Following student research, interviews, and activities related to study of *Women In The Environment*, return to the class's pre-assessment questionnaire results. Have the students review their feelings, lists and opinions prior to their research. How do they feel now about the role of women in the past? Are they able to list more names? Why do they think women's participation in science has not been publicized more in the past? Can they relate historical developments, primarily the women's right to vote and wars, to the increase in women in environmental and scientific professions? How do they see themselves, currently and in the future, either working in or participating as private citizens in environmental issues and conservation?

Activity 4: Women In the Environment Crossword Puzzle

Across

- 1: Rosalie Edge founded a _____ for raptors.
- 4: A bird sanctuary and the field guide it was named after.
- 7: The _____ movement protects the environment.
- 9: The Audubon Society helped stop the hunting of birds for their _____.
- 11: Founder of The Massachusetts Audubon Society.
- 14: A group tasked with protecting birds.
- 15: In the early 20th century, few women pursued a _____ in the sciences.
- 17: Marjory Stoneman Douglas was instrumental in creating _____ National Park.
- 19: Anna Botsford-Comstock wrote insect and _____ guides.
- 22: Ann LaBastille, Mabel Osgood Wright, Helen Ross Russell, and several other women in conservation studied at this university.
- 23: Frances _____ Kellogg donated her land to the state for protection after her death.
- 24: The study of living organisms and the nonliving components of their habitats.
- 25: Helped pass the Wilderness Act, called “the Grandmother of the Conservation Movement”
- 27: *The Handbook of Nature* _____

Down

- 2: Mycology is the study of _____
- 3: A group founded by Rosalie Edge to aid the Audubon Society financially.
- 5: Jane Goodall’s research refuted the belief that only humans were capable of using _____.
- 6: Beatrix Potter’s primary scientific interest.
- 8: Barbara Ward Jackson championed this.
- 9: Rachel Carson worked to end excessive _____ use.
- 10: Helen Ross Russell wanted to enrich environmental education by incorporating more _____ into lessons.
- 12: Irene Pepperberg’s research with _____ has broadened our understanding of bird intelligence.
- 13: A book by Marjory Stoneman Douglas.
- 16: Rachel Carson’s most important book.
- 18: An _____ studies insects.
- 20: A book by Ann LaBastille.
- 21: Primatologist colleague of Jane Goodall who studied gorillas.
- 24: Jolene Unsoeld worked to promote _____ conservation.
- 26: _____ can be used to draw attention to and teach about the environment.



Your friend and teacher
Anna Bostford Comstock
July-1916

Anna Bostford-Comstock

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Carl A. Kroch Library, Cornell University, Ithaca, NY 14853-5302

Anna Botsford-Comstock

Nature study is an important part of environmental sciences. Anna Botsford-Comstock was an early proponent of nature study, emphasizing the need to understand its interrelationships.

Anna's interest in the natural environment stemmed from her artistic ability to create anatomically correct illustrations of insects, leading to her specialization in the field of entomology. In 1874, while studying Natural History at Cornell University, she met her husband, noted entomologist John Comstock. She began illustrating his textbooks and lectures while continuing her work towards a bachelor of science degree, which she eventually completed in 1885. She and John coauthored several books, including *Insect Life* and *Ways of the Six Footed*. She continued to develop the field of nature study, eventually founding and heading Cornell's Department of Nature Study. This made her the first woman professor at Cornell University.

While part of New York State's Committee on the Promotion of Agriculture, she emphasized the need for responsible care of resources and worked on early pest management plans. As a

member of the American Nature Study Society and the American Nature Association, Anna helped to shape national educational policies for the field of science. From 1917-1923, as the editor of the *Nature Study Review* now known as *Nature Magazine*, Anna produced many well-known writings, displaying her unique practice of including basic information with scientific terminology for the general public.

Anna's most important work, *The Handbook of Nature Study*, was developed to provide elementary teachers with a guide on how to teach their students about the interrelationships of animal life, plant life, and the earth and sky. Her husband was quite skeptical of the need for such a guide and discouraged her work on this 900-page book. Twenty-four editions and eight different language translations later, the "nature bible," as it became known, emphasized the need for natural history education at the most basic level. Today much of the environmental education in school and informal settings, such as nature centers, follow the principals set forth by this pioneering environmental educator.

1854	Born September 1
1874-1876	Attends Cornell University
1878	Marries John Comstock
1885	Attains B.S. Degree in Nature Study
1895	Conducts a pioneering nature study course in West Chester County, New York
1897	Co-authors and illustrates <i>Insect Life</i> with husband John Comstock
1917-1923	Editor of <i>Nature Study Review</i>
1903	Co-authors <i>The Ways of the Six-Legged</i>
1904	Publishes <i>How to Know Butterflies</i>
1905	Publishes <i>How to Keep Bees</i>
1911	Publishes <i>Handbook of Nature Study</i>
1914	Publishes <i>The Pet Book</i>
1916	Publishes <i>Trees at Leisure</i>
1930	Dies August 24 at age 75
1953	<i>The Comstocks of Cornell</i> published posthumously



Rachel Carson

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Photograph taken by Shirley A. Briggs

Rachel Carson

Rachel Carson was born on May 27, 1907 in Springdale Pennsylvania. From a very young age, she was interested in exploring the outdoors and writing. Her literary skill emerged through the stories and poems she produced while still in elementary school. Later her writings would educate and change public opinion on many important environmental issues. As a young adult, Rachel enrolled at Pennsylvania College, later renamed Chatham College, to pursue writing. While there, she was introduced to the area of science known as biology, which quickly drew her interest and enthusiasm. Against her teachers' and classmates' advice, Rachel changed her major to biology. Science was a field women did not pursue in those days, and she was often discouraged from continuing, as it would be difficult for her to make a living. Nevertheless, she graduated in 1929 with her degree in biology and accepted a summer position at Woods Hole Biological Laboratory in Cape Cod. She had always been fascinated by ocean life and her love for it increased during her time at the lab. The following fall, Rachel entered Johns Hopkins University under a full academic scholarship, graduating in 1932 with her Master's Degree in Marine Biology.

After graduation, Rachel was hired by the United States Bureau of Fisheries, not as a biologist but as a writer producing radio spots about fish. Her writing ability and scientific background lead to further duties that included developing and editing government reports and creating nature stories. In 1941 she published her first book, *Under the Sea Wind*, uniting fiction with scientific facts for an approachable and accurate text. By 1949, Rachel had risen to the rank of editor in chief of the U.S. Wildlife Service's publications. She continued to work on her own literary projects, and in 1951 she published her award winning book, *The Sea Around Us*.

In 1952, Rachel left the Wildlife Service to pursue writing full-time and moved to Maine to be closer to her beloved ocean. Here she wrote her third book, *The Edge of the Sea*, this one focusing on the ecological link between different habitats. At that time little work was being done in the emerging science of ecology. Rachel's book reflected on this area of science, emphasizing the importance of plant and animal diversity to create a balanced system.

In the early 1960's Rachel began work on her most famous book, *Silent Spring*. This work would address her concerns about the widespread use of DDT, a common pesticide, and its dangerous effect on bird populations. It took four years to compile data and research supporting the position that DDT needed to be banned and pesticide use controlled, so that overuse would not result in environmental damage. When *Silent Spring* was published in 1962, the issue of pesticide use was volatile. A special committee was formed by President Kennedy to look into the issue of environmental protection. This would lead to the formation of the Environmental Protection Agency (EPA) in 1970. Rachel became an early environmental spokesperson, working toward protection of natural resources and environmental health. In 1972, the EPA banned the use of DDT in the United States. Sadly, Rachel Carson had died on April 14, 1964 from cancer and was not able to see the culmination of her work, writings and research.

Rachel Carson's influence in the area of science and importance in conservation and ecology has lasted long past her death. She received the Presidential Medal of Freedom and a national wildlife refuge in Maine was created in her honor. Today, the Rachel Carson Council continues her work providing information on environmental issues.

- 1907** Born May 27
- 1925** Studies at Pennsylvania College, now Chatham College
- 1929** Graduates from college and accepts position at Woods Hole
- 1932** Graduates with master's degree in marine biology
- 1936** Employed at the U.S. Bureau of Fisheries
- 1941** Publishes *Under the Sea Wind*
- 1951** Publishes *The Sea Around Us*
- 1953** Leaves Wildlife Service and moves to Maine
- 1955** Publishes *Edge of the Sea*
- 1962** Publishes *Silent Spring*
- 1964** April 14, dies from cancer
- 1965** *A Sense of Wonder* published posthumously



Rosalie Edge

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Rosalie Edge

Rosalie Barrow Edge was born on November 3, 1877, the youngest of eight children. At the age of 32, Rosalie married Charles Noel Edge, with whom she had two children: Peter, born in 1913, and Margaret, born in 1915. After 15 years of marriage, she separated from her husband and made her home in New York City with her children. Rosalie devoted considerable time to bird-watching in Central Park, where she met fellow enthusiasts, including biologists from the American Museum of Natural History.

In 1929, at the age of 52, Rosalie Edge launched her career as a conservationist while staying in Paris. She received a copy of "A Crisis in Conservation," which discussed the dangers facing many North American birds. The book had been published several months earlier by Willard Van Name, curator of marine invertebrates and accomplished ornithologist with the American Museum of Natural History. Rosalie returned to New York to meet Dr. Van Name. From this meeting, Rosalie founded the strident organization, The Emergency Conservation Committee (ECC), with the objective of ending the financial dependence of the National Audubon Society on hunters. The activities of the committee revolved around developing press releases, letters, and pamphlets supporting the preservation of all birds and the protection of their habitats. She contended that the Audubon Soci-

ety's president was mismanaging funds by accepting royalties from trappers and hunters. By making this public knowledge, the membership of the Audubon Society shifted, leading to the reorganization and new management of the group in 1934.

That same year, Rosalie Edge founded Hawk Mountain Sanctuary in Eastern Pennsylvania, the first refuge for raptors. This was a crowning achievement for Rosalie and the ECC. The 1930's also saw the ECC save a 6,000 acre grove of sugar pines on National Forest Service land bordering Yosemite National Park, help achieve the creation of Olympic National Forest in Washington State, and work for the establishment of Kings Canyon National Park in California, all for bird habitat preservation. Rosalie testified numerous times at Congressional hearings, wrote reams of letters, and authored numerous educational pamphlets on birds, national parks, and forests for the general public and schools. Rosalie's success in environmental activism was rooted in her past work in the suffrage movement in the early 1900's, when she had been secretary of the New York State Woman's Suffrage Party.

Today Rosalie Edge is gaining the attentions of environmental historians who are ranking her contribution to the national park and conservation movement with such giants as John Muir and Rachel Carson.

1877	Born November 3
1900	Works as a Suffragette
1909	Marries Charles Noel Edge
1916	Separates from her husband
1929	Forms Emergency Conservation Committee
1930	Files grievance against National Audubon Society with Civil Liberties Union
1934	National Audubon Society recognized, Hawk Mountain established
1938	Hawk Mountain incorporated as non-profit
1962	Attends annual meeting of National Audubon society as guest of honor
1962	Dies at the age of 85



Wangari Maathai

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Photographer Martin Rowe

Wangari Maathai

*“Until you dig a hole, you plant a tree, you water it and make it survive, you haven't done a thing.
You are just talking.”*

Speech at Goldman Awards, San Francisco (24 April 2006)

These are the words Wangari Maathai, founder of the Green Belt Movement, lives by. The Green Belt Movement (GBM) works across much of sub-Saharan Africa helping villages and towns by planting trees. This promotes an eco-friendly atmosphere and helps bind villages together and overcome social issues throughout the area by uniting people in pursuit of a common goal.

Wangari Maathai was born in Nyeri, Kenya in 1940. She completed her bachelor's degree in Biological Sciences from Mount St. Scholastica College in Atchison, Kansas in 1964. She went on to earn a Master of Science degree from the University of Pittsburgh in 1966 and a Ph.D. from the University of Nairobi 1971, becoming the first woman from East/Central Africa to receive a doctorate. She was soon appointed chair of the University of Nairobi's Department of Veterinary Anatomy.

Wangari joined the National Council of Women in Kenya in 1976, serving as the council's chairman from 1981-1987. One of her first projects for the council was a community tree-planting project to prevent soil erosion. She originally organized it as a local program that was almost purely environmental in its approach. However, the project became a springboard for women's rights, as the program gave women

responsibilities and jobs in the conservation sector. With these changes, her program expanded to encompass most of Sub-Saharan Africa.

Wangari's greatest challenges were provided by political and sexist traditions that she worked to change. Her questioning of these discriminative practices led to multiple arrests. Wangari's husband falsely accused her of infidelity and filed for divorce, claiming that she was “too strong willed and too educated to control.” A judge ruled in his favor during the divorce, sentencing her to imprisonment for infidelity. She refuted the court's conclusions in an interview, causing the judge to charge her with contempt of court and sentence her to prison on a six month term, though she only served three days.

In January of 1992, a political coup took place in Kenya and Wangari's work for equal rights for women and belief of multi-party democracy had her listed for assassination. She was ultimately arrested by the single-party government, but pressure from nations in Europe and North America forced her release. Later that year, she would help establish a multi-party democracy system in Kenya and smooth the political transition. In 2002, she ran for election to parliament under the National Rainbow Coalition and won the race in a landslide.

In 2004, Wangari became the first African woman and the first environmentalist to win the Nobel Peace Prize, which was awarded for her political achievements and her work with the GBM.

- 1940** Wangari Maathai is born on April 1 in Nyeri, Kenya
- 1976** Joins Kenya's National Council of Women
- 1977** Judge has her arrested for comments she makes about divorce case
- 1986** Green Belt Movement becomes a Pan-African movement
- 1992** Arrested by the Kenyan single-party government, then helped replace it
- 2002** Becomes Fellows Professor at Yale School of Forestry, taught course on sustainable development
- 2004** Receives Noble Peace Prize
- 2006** Spearheads UN Billion Tree Campaign and becomes founder of the Nobel Women's Initiative
- 2009** Receives NAACP Image Award and Chairman's Award
- 2011** September 25, Passed away from cancer



Marjory Stoneman Douglas

Photograph provided and copyrights reserved by Friends of the Everglades
Photographer, Sharon Kingston

Marjory Stoneman Douglas

“I can talk all night and I’m used to the heat.” Famous words, spoken by Marjory Stoneman Douglas at many town meetings when the wisdom of preserving the Everglades was questioned. Marjory was one of the first proponents of saving this massive river of grass. Her understanding of the interrelationship between the physical and living systems of the Everglades fueled her passion for protecting this wild space. Her gift with words and writing ability provided Marjory with the tools to reach people on local and national levels. She fought against the long-standing view that this large swamp was useless for anything but breeding mosquitoes and should be drained and cleared for development.

Marjory witnessed attempts at development in the Everglades in the 1940s. As tracts of the Glades burned uncontrollably for days due to dry vegetation and shrinking water supplies, she wrote of the disaster, “What had once been a river of grass and sweet water had now become a river of fire.” Finally, in 1947, after twenty years of work and growing public support, President Harry S. Truman declared the Everglades a National Park. Marjory published her book, *River of Grass*, that same year.

Even with federal protection, the development of the Glades continued under projects designed for “improvement” by the Army Corps of Engineers. Marjory met this new challenge with vigor, and founding The Friends of the Everglades in 1969. Membership grew from 500 the first year to over 3000 in 38 states in three years. Eventually, the government ended the development project and the Glades returned to its natural state. In 1991, Marjory had the honor of seeing protective legislation signed into law on her own front yard by then Governor Lawton Chiles.

Marjory served as a role model for what can be accomplished when dedicated individuals become involved in a cause. She worked until her death in May of 1998 at the age of 108, showing that age does not have to limit drive or ability. Her passion for the Everglades still drives with the groups she founded: The Friends of the Everglades, The Young Friends of the Everglades, and the Marjory Stoneman Douglas Nature Center. These organizations continue her work today and encourage new people to get involved in conservation.

- 1890** April 7, Marjory Stoneman born in Minneapolis, MN
- 1896** Parents divorce and Marjory moves with her mother to Tawton, MA
- 1912** Graduates from Wesley College
- 1915** Marries Kenneth Douglas
- 1915** Reunites with her father and moves to Florida to work as a writer at the Miami Herald
- 1924** Leaves Miami Herald and writes freelance for The Saturday Evening Post and Ladies’ Home Journal
- 1928** Writes the book, *Rivers of America*, redefining the understanding of the Glades as a river, not a swamp
- 1947** Establishment of Everglades as a National Park by Harry Truman
- 1947** *River of Grass* published
- 1969** Establishes Friends of the Everglades
- 1975** Named Conservationist of the Year by the Florida Audubon Society
- 1976** Named Conservationist of the Year by the Florida Wildlife Federation
- 1989** Named Honorary Vice President of the Sierra Club
- 1991** Governor Lawton Chiles signs state legislation to protect and restore the Everglades
- 1993** Receives Medal of Freedom from President Clinton
- 1994** Young Friends of the Everglades established
- 1998** May 14, dies at the age of 108



Mabel Osgood Wright

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Communications Office, 2325 Burr Street, Fairfield, CT 06430

Mabel Osgood Wright

Growing up in New York City in the 1800s and spending summers in Fairfield, CT helped form Mabel's appreciation of nature. Her interest in the natural environment was largely due to her father's influence. Diaries kept in childhood and as a young adult give insight into the developing convictions of a young woman firmly against urbanization.

Originally, Mabel wished to study Medicine at Cornell University, a rarity for a Victorian woman. However, her interests in science lead her to the American Museum of Natural History in New York. Here, she used the extensive collections to learn about bird taxonomy and developed and interest in conservation. In 1884, she married James Osborn Wright and the couple moved to Connecticut. The same year saw her first book published, *The Friendship of Nature*. Its popularity made her name synonymous with conservation. The next year her most popular book, *Birdcraft* (a name that would play a great role in years to come), was published. Other writings included magazine articles and books using both technical formats and narrative description. Her interest and abilities as a photographer aided her in illustrating books using colored glass plates of black and white photos.

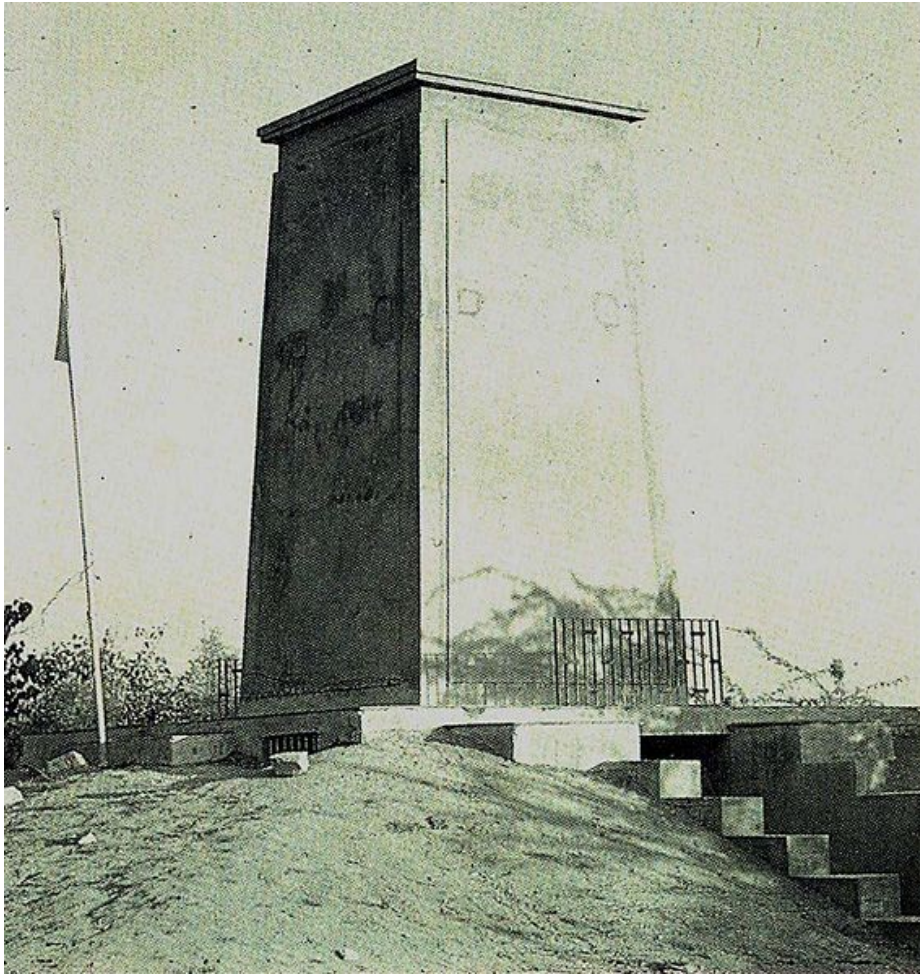
At this time, the Audubon Society was just being established and was meeting difficulty due to weak national leadership. So on January 28, 1898, thirteen women gathered at the home of

Mrs. William Glover to form the Audubon Society, State Of Connecticut (later renamed Connecticut Audubon Society). Mabel served as the first president of this group. Its early efforts focused on pressuring lawmakers to protect birds from being killed for their plumage, which was a popular adornment for ladies' hats. This led to the ratification of the International Migratory Bird Act of 1918, which made it illegal to kill the species under its protection.

Mabel's interest in the environment was rooted in education, and she emphasized the need to provide children with natural history education. She created exhibits and, with some enthusiastic friends, taught environmental lessons to school children throughout the state.

In 1914, Mrs. Wright spearheaded the development of a songbird sanctuary in Connecticut. With the help of friends, she purchased ten acres across the street from her home. She named the preserve after her popular field guide *Birdcraft*, then in its seventh edition. Research on birds and other wildlife began almost immediately, demonstrating the utility of this sanctuary. By the 1920s, *Birdcraft* saw 30,000 visitors a year. At her death in 1934, aged 75, Mabel had achieved great status as a visionary for the protection of birds and habitats, an educator and leading conservationist for the state, and as the founder of the Connecticut Audubon Society and the Birdcraft Center in Fairfield, CT.

- 1859** Mabel Osgood born January 19
- 1884** Marries James Osborn Wright
- 1884** Publishes best selling book, *The Friendship of Nature*
- 1885** Publishes *Birdcraft*, one of the first and most successful bird manuals
- 1898** January 28, formation of Audubon Society, State Of Connecticut (Renamed Connecticut Audubon Society)
- 1898** Prioritizes the education of children in natural history education to children, produces traveling programs and displays for classroom use
- 1918** Establishes Birdcraft Center, Fairfield, CT
- 1934** Dies at home at the age of 75



[Cenotaph](#) of [Bishnoi](#) martyrs at [Khejarli](#), who laid down their lives in [1730](#) CE protecting trees
Photograph provided and copyright reserved by Wikimedia Commons
Photograph taken by LRBurdak



Photo of Uttarakhandi's Latka Village women members of the Chipko movement taken circa 1970
Photograph provided and copyright reserved by Women in World History

Amrita Devi and the Chipko Movement

Amrita Devi began what most know today as the Chipko Movement in the 18th century. This practice, which involves surrounding and hugging trees to protect them from loggers, is still in existence today, nearly 300 years later. The story of her bravery has been preserved through the years in Indian culture.

The first Chipko occurred around 1730 in the Indian village of Khejarli. The village was surrounded with many sacred Kejri trees, which protected the community from the neighboring arid desert by providing them with water and shelter from sandstorms. One night, however, a group of unknown men came to the village with an order from the Maharaja to cut down the Kejri trees as lumber for the construction of his new palace. Amrita refused to let this happen. The tree cutters said she could offer money as a bribe, but she refused, saying that such behavior would be an insult to her way of life. Because of her defiance and pride, Amrita was beheaded along with three others that day. The villagers rallied around the sacrifice that Amrita and the others had made, and people from all over the area — men, women, children, and the elderly — began to gather around the trees, hugging them. In all, 363 people would sacrifice their lives for the forests they relied on and loved so dearly. Once this informa-

tion reached the Maharaja, he ordered that the tree cutting be stopped, and the forests around Khejarli were spared.

Various awards have been given to the Chipko movement, which was inspired by the actions of Amrita Devi. Today, it is an organization that not only looks out for the environment but is also on the forefront of social reform. The modern Chipko movement began to gather momentum in the 1970s when the Indian Forestry Department let contractors cut down trees for the manufacture of sports equipment. The people of the area were outraged and held many protests from 1972 to 1974. This culminated when a group of villagers who saw the contractors begin to harvest trees threw themselves in front of them, literally hugging the trees. They remained in place for a few days without rest until the harvesters finally gave in. The people of this group, officially known as the Chipko Movement, were often labeled “tree huggers” were the origin of the term now applied to environmental activists around the world. The almost entirely female group brought about many positive changes in the environment, and in 1987 they were awarded the Right Livelihood Award, which is very similar to a Nobel Prize.

- 1730** Amrita and 363 others sacrifice themselves defending forests of Khejarli
- 1730-1972** Various protests to protect forests resulted in death or arresting of protestors
- 1973** Protectors come out in force to fight Forestry Department from taking down trees for sports company
- 1987** Right Livelihood Award, in recognition to personal courage and social transformation



Frances Osborne Kellogg

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Frances Osborne Kellogg

Frances “Fannie” Osborne was the only child of Wilbur and Ellen Osborne to survive infancy. She spent her entire life on the family estate at 500 Hawthorne Avenue in Derby, CT. At the age of 16, Fannie lost vision in one eye due to an accident, resulting in her never completing her formal education. However, she was educated in a different way as she began to accompany her father to work. This gave her great insight into business and industry, an area that women seldom entered at the time. When her father died in 1907, she took over his manufacturing plants and other positions, including that of president of Union Fabric Co., Derby Silver Company, vice president of Connecticut Clasp Co., and treasurer of Kelly Co. She later founded Steels and Buses Ltd. in Leicester, England, thereby making her mark as one of the first women industrialists in an era when females were not usually allowed to work for wages.

It wasn't until the age of 43 that she married well-known architect Waldo Stuart Kellogg. With his help, Fannie expanded the small family dairy farm and business into a world-famous Holstein-Friesian dairy herd and breeding facility. Sadly, though, after only nine years of marriage Waldo died, leaving the operation of the dairy herd and business to Fannie. The farm continued to thrive under Fannie's directorship until her

death in 1956, when the herd was sold.

Fannie was always involved in her community and served as president on many organizations and committees. She was the first female member of both the Derby Board of Education and the Derby Board of Zoning Appeals. She was also the first female bank director in Connecticut, leading the Birmingham National Bank, now called the Bank of Boston. She was an officer and director of the American Holstein-Friesian Association and the first woman to serve on the board of the Connecticut Forest & Park Association, working to preserve and build our state forests.

Fannie's interest in land preservation was affirmed when, in 1951, the town of Derby claimed her dairy's pastures through eminent domain to use for a housing development. Wishing to keep her lands intact and provide for their conservation, she donated her estate and land to the State of Connecticut for use as a Connecticut State Park. Frances died in 1956, and the property and estate was officially opened to the public as Osbornedale State Park and Osborne Homestead Museum in 1983. Her estate also provided for the establishment of the Kellogg Environmental Center, which serves as a public outreach resource for conservation, natural history, and the preservation of land and other resources.

1876	Born on 14 May
1892	Loses sight in one eye, stops formal education
1907	Takes over as President of father's businesses
1907	Co-founds of Steels and Busk Ltd. Factory in New England
1919	Marries Waldo Stewart Kellogg
1928	Waldo dies at age 57
1935	Becomes first woman bank director in Connecticut
1951	Donates her estate to the State of Connecticut
1956	Dies at age 80
1960	Osbornedale State Park opens
1983	Estate is officially opened to the public as a historical museum, Kellogg Environmental Center established



Lisa P. Jackson

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Lisa P. Jackson

Born on February 8, 1962 in Philadelphia, PA., Lisa P. Jackson grew up in the Ninth Ward of New Orleans, LA. She attended Saint Mary's Dominican High School in New Orleans and was the valedictorian of her graduating class in 1979. Her skill with mathematics earned her a scholarship from the National Consortium for Graduates Degrees for Minorities in Engineering and Science. It was during her graduate work at Princeton University that she became interested in environmental issues, specifically reducing pollution and hazardous waste while following news coverage on the cleanup at Love Canal.

Working for Clean Sites, a nonprofit that worked to clean up hazardous waste sites, brought her awareness of vulnerable groups exposed to these hazards that normally did not have a voice in politics. Lisa saw that the most valuable work in pollution prevention was being done by the Environmental Protection Agency (EPA). She began to work for the EPA in Washington DC as a staff engineer, later transferring to the regional office in New York City. She focused on

superfund sites, remediation programs that addressed hazardous material cleanups throughout central New Jersey. She joined the New Jersey Department of Environmental Protection (NJDEP) in March 2002 and became the commissioner in 2006. At the NJDEP, she organized many programs in diverse fields, including the development of the Highlands Water Protection and Planning Act. All totaled she lead a staff of 2,990 professionals to protect, sustain and enhance New Jersey's water, air and land, and preserving its wealth of natural and historic resources.

In 2009 Lisa Jackson became the fourth woman and the first African American to head the EPA. Her involvement in Environmental Justice for underserved population brought a new dimension to the area of standards and policy design for the EPA. In December 2009, she announced the beginning of a federal program to reduce greenhouse gas emissions. This was quickly followed by the institution of a national emissions limit for vehicles.

1962	Born in Philadelphia, PA
1979	Graduates valedictorian of St. Mary Dominican High School, New Orleans, LA
1983	Graduates summa cum laude from Tulane University
1986	Graduates Princeton University, begins work with Clean Sites and the EPA
2002	Becomes staff engineer for New Jersey Department of Environmental Protection
2006	Becomes commissioner of New Jersey Department of Environmental Protection
2007	Named Cabinet member of the Year, New Jersey Conference of Mayors
2008	Becomes Chief of Staff For New Jersey Governor's Office
2009	Appointed Environmental Protection Agency Head
2010	Newsweek Magazine names her among the ten most important people of the year



Winona LaDuke

Photographer Randall Denning

Winona LaDuke

Born 1959 in Los Angeles, California into a family of activists. Her father Vincent LaDuke (Sun Bear) was part Anishinaabe (Ojibwe), a supporting actor in western movies and an activist for Native American issues. Her mother Betty Berstein LaDuke an artist influenced by her experiences growing up and working in multi-ethnic communities. Winona's parents divorced in 1964 and she was raised in Ashland Oregon by her mother.

While attending Harvard University Winona met Jimmy Durham a well-known Cherokee activist, who inspired her interest in Native American environmental issues. This resulted in her speaking before the United Nations, International Indian Treaty Council on Native American issues of mining and reservations when she was just 18 years old.

After graduating from Harvard LaDuke moved to the White Earth Reservation in Northern Minnesota. Here she took a job as principle of the high school but soon after began the White Earth Land Recovery Project (WELRP). The project's goal is to gain back possession of the land, sold off to mining interests, that had been held by White Earth Reservation. WELRP, having exhausted legal means, has bought back thousands of acres of this land. These purchases are partly funded by Native Harvest of which Winona is the founding director. Native

Harvest promotes and sells agricultural products such as, heritage wild rice, organic coffee, maple products, and artisan handcrafts. WELRP won the Slow Food Award for preservation of biodiversity in 2003 for its work preserving and protecting wild rice.

In 1993 Winona and the Indigo Girls, Amy Ray and Emily Saliers, started the non-profit Honor the Earth to support the Native environmental movement. Honor the Earth provides "funding grassroots (to) Indigenous organizations focused on creating food security utilizing Indigenous varieties and organic production as well as Indigenous groups and projects implementing energy efficiency and renewable energy strategies at an appropriate scale to support dignity in the community."

LaDuke ran on the Green Party ticket for Vice President of the United States at the invitation of her running mate Ralph Nader in 1996 & 2000. She has also written four books, *Last Women Standing*, *All Our Relation: Native Struggles for Land and Life*, *The Winona Duke Reader: A collection of Essential Writings*, and *Recovering the Sacred: The Power of Naming and Claiming*.

Winona lives on the White Earth reservation where she raised 5 children and is now a grandmother. She continues to advocate, teach, write, and lecture about environmental issues and sustainable use of the earth's resources.

1959	Born in Los Angeles, CA
1977	Speaks to the United Nations about Native American issues
1978	Legal research writer for the National Indian Youth Council
1982	Graduates with degree in Rural Economic Development, Harvard University
1989	Graduates Antioch University with M.A. Community Economic Development; starts White Earth Recovery Project; receives International Reebok Human Rights Award
1991	Co-founded Honor the Earth with the Indigo Girls, named to board of directors of Greenpeace
1995	Named one of "50 Leaders" by <i>Time Magazine</i>
1996	Receives the Thomas Merton Award and the Ann Bancroft Award
1996 & 2000	Ran as Vice Presidential candidate on Green Party ticket with Ralph Nader
1997	Named Woman of the Year by <i>Ms. Magazine</i> , publishes <i>Last Women Standing</i>
1998	Women's Action for New Direction Leadership Award
2000	Woodcraft Circle Writer of the Year Award for <i>All our Relations</i>
2007	Inducted into National Women's Hall of Fame

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Crossword Answer Key

Across

- 1: Refuge
- 4: Birdcraft
- 7: Conservation
- 9: Plumes
- 11: Harriet Hemenway
- 14: Audubon
- 15: Career
- 17: Everglades
- 19: Tree
- 22: Cornell
- 23: Osborne
- 24: Ecology
- 25: Margaret Murie
- 27: Study

Down

- 2: Fungus
- 3: ECC
- 5: Tools
- 6: Mycology
- 8: Sustainable Development
- 9: Pesticide
- 10: Field Trips
- 12: Alex
- 13: River of Grass
- 16: Silent Spring
- 18: Entomologist
- 20: Woodswoman
- 21: Dian Fossey
- 24: Energy
- 26: Art

NOTES
