

Cover Story:

Rachel Carson Human Ecologist



Rachel Carson, who graces our cover, deserves much of the credit for bringing the public's attention to ecological issues. We have chosen her as the first of eight famous women biologists who will be featured in this and the next seven issues. In one of our recent courses entitled "Two Cultures, Four Epochs," we were shocked to learn that only one student in the whole class had ever heard of Rachel Carson. Upon further investigation, this ignorance seemed widespread even among undergraduate biology majors. Thus, the proverbial "Two Cultures" split seems to extend into our own scientific culture as well. Hence, we felt that we might share the concerns, the contributions, and the difficulties that Rachel Carson faced in educating the public about the panorama of human ecology.

Most people know Rachel Carson as the author of *Silent Spring*, the 1962 bestseller which discussed the effects of abusing pesticides. Since she died of cancer in 1964, she did not live to see a whole environmental movement or Earth Day. However, few people realize the tremendous accomplishments which she did see in her own time or the resistance which she received even from our own quarters. "When I found out that Rachel Carson was looked upon with suspicion by the scientific community because she did not have a Ph.D. and because she was so deeply concerned with educating the public, I laughed and I cried. Here was somebody who had done more than anybody else I was aware of to integrate science with public concerns, and she was mistrusted and put down!" (Arditti, 1980). This is well born out in Paul Brooks' (1974) biography and in Frank Graham, Jr.'s (1970) update of her work. Margaret Rossiter's (1982) chapter entitled "Government Employment: Paper Reforms but Expanded Segregation" cites Rachel Carson as one of her examples: "Rachel Carson, with a master's degree in zoology, was probably the first woman scientist at the Fish and Wildlife Service when she became a 'junior aquatic biologist' there in 1936." Despite the public knowledge that Rachel Carson was the winner of a national book award for one of her three earlier books, a *Time* (1962) writer could reduce her to diminutive status and an overly emotional woman by stating that she had "taken up her pen in

alarm and anger, putting literary skill second to the task of frightening and arousing her readers." Furthermore, the anonymous writer referred throughout to scientists, experts and technically informed people as if Carson were not among them. Just so your students won't have to go looking, we share the following short biography.

Rachel Carson was born in Springdale, Pennsylvania on May 27, 1907. She was raised in Springdale and Parnassus, another local town. Following high school, she entered the Pennsylvania College for Women at Pittsburgh. Her original intention was to major in communications and become a writer. However, a course in biology led her to major in biology. After graduating in 1929, she went to Johns Hopkins where she received her master's degree in 1932. Her graduate education was extended by work at the Marine Biological Laboratory in Woods Hole, Massachusetts. Thus, her graduate education was obtained at two of the most prestigious institutions in America.

In 1936, she accepted the aforementioned job with the United States Bureau of Fisheries, later to become the U.S. Fish and Wildlife Service. At this point in Rachel Carson's life, her dual interests in biology and writing came together and developed around themes related to the environment. She became editor and chief of the Bureau in 1947 and continued in that position until 1952 when she resigned to devote all her time and talents to writing.

In 1941, her first book, titled *Under the Sea-Wind*, was published. Though the book had good reviews, it was relatively unnoticed by the public. It was late in the 1940s before she began her second book. *The Sea Around Us*, published in 1951 gained wide acclaim. Carson followed this book with *The Edge of the Sea* (1955). All the reviews of Rachel Carson's work support the talent she had for expressing a sensitivity toward nature while presenting scientific information in an interesting manner.

Silent Spring directed attention to the negative effects of pesticides. Carson warned that the indiscriminate use of chemicals could still the songs of birds and the leaping of fish and linger on in the soil. Society could soon experience a silent spring. The book caused intense debate. In many cases,

Rachel Carson had gone beyond the available evidence and suggested effects for which she had little empirical data. Predictably, industry attacked the book while defending their products. The government began investigations of DDT and other pesticides. *Silent Spring* and Rachel Carson had the power to gain national attention and make her conviction ours. During a Congressional hearing she stated: "I deeply believe that we in this generation must come to terms with nature."

The legacy of Rachel Carson continues beyond her death on April 14, 1964 at the age of 56. For those who supported the environmental movement she became a symbol of sanity and the spokeswoman of their cause. For those who doubted the harmful effects of pesticides, she became a very respected adversary. Battles have been fought and won on many sides of numerous environmental issues. In the process, our awareness and values have been altered in the two decades since Rachel Carson's most important book. "When she began writing, the term 'environment' had few of the connotations it has today. Conservation was not yet a political force. To the public at large the word 'ecology' . . . was unknown, as was the concept it stood for. This concept, however, is central to everything that Rachel Carson wrote. Few of us have

dwelt with such awareness and understanding in the house of life" (Brooks, 1972).

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