

Rachel Carson

By Frank Graham, Jr.

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Robert Frost liked to make a point with an anecdote as well as with a poem: A boy came to my home the other day," Frost recalled, "and he said to me, 'I'm a poet.' I said, 'That's a praise word. I'd wait until somebody else called me that.'"

Rachel Carson did not have to pin any labels on herself. There were many other people all over the world who were eager to use praise words to describe her and her work. Poet was one of them, for she wrote prose with a poet's passion. Scientist was another. As a marine biologist who worked for the old U.S. Bureau of Fisheries and later for the Fish and Wildlife Service, she gathered the background to write those distinguished books on the sea that were read by millions here and abroad. Conservationist was still another. No one in our country's history believed more profoundly in the aim of conservation -- as an attempt to understand and preserve the capacity of land, water and wildlife for self-renewal, in all their diversity and complexity. Nor was anyone in our history able to create among the public an "ecological conscience" as ably as Rachel Carson did.

Yet this intensely private person, whom her superiors at the Fish and Wildlife Service remembered as being so shy originally that she could hardly get out the words to discuss a new project, became the center of one of the most bitter public controversies in the post-war era. As she lay dying of cancer at the age of 56 in 1964, other labels still swirled about her. "A nun of nature, a votary of all outdoors," some over-enthusiastic admirers gushed, while from much less friendly quarters came epithets like "mystic," "food faddist," "health quack" and bird-lover." A dispassionate look at both her personality and achievements suggests that of these characterizations, coined in the heat of battle by both friend and foe, only the last was accurate.

Rachel Carson was an unlikely crusader. Born in Springdale, Pennsylvania, far from the sea with which she was later so closely identified, she spent her childhood absorbed in books and in the wild things around her home, to which her mother had lovingly introduced her. Her first inclination was toward poetry. She apparently produced a smattering of the poetic effusions common to many sensitive young people, but all that survived at her death was a sheaf of rejection slips from the magazines to which she sent her poems. At that stage she was a poet in search of a subject.

A subject revealed itself part way through her undergraduate course at the Pennsylvania College course at the Pennsylvania College for Women, when her romantic attraction to the sea coincided with a growing fascination for biology. She went on to study biology and genetics at Johns Hopkins University, where she earned her master's degree in 1932. (Her doctorates were honorary.) For a time she taught zoology at the University of Maryland and spent her summers working at the Marine Biological Laboratory in Woods Hole, Massachusetts. She became a Federal aquatic biologist in 1936.

It was during those Depression years that Carson, intent on making a living, unwittingly was preparing herself for the drama ahead. Though taken up with her detailed studies of small aquatic life (her master's thesis was entitled "The Development of the Pronephros During the Embryonic and Early Larval Life of the Catfish *Ictalurus punctatus*"), she never lost her early vision of the complexity and majesty of the sea, or indeed, of nature itself. To the end of her life she kept close to her the books by writers she thought captured those qualities -- Melville, Thoreau, Conrad, Richard Jeffries, Henry Beston, H. M. Tomlinson-- and letters to her closest friends were filled with references to them.

Immersed in her science, her imagination resonant with phrases from favorite books read and read again, Carson began composing short articles about what she knew best, the natural world. She became a contributor to a Baltimore newspaper while sharpening her skills writing official government publications. In later years she was given the title Biologist and Chief Editor in the Fish and Wildlife Service. An article of hers in the Atlantic attracted the attention of several writers and editors who suggested that she write a book, and this suggestion changed the course of her life. Not immediately, it must be said, for though her articles had already attracted many admirers, her personality and the circumstances of her life prevented her from moving with dramatic suddenness. "I am a slow writer," she once said, "enjoying the stimulating pursuit of research far more than the drudgery of turning out manuscript."

Moreover, Rachel Carson, for all her craving for privacy, was never free to act utterly independently. Even in the hours away from her demanding job at the Fish and Wildlife Service, she had a home to run. Though she did not marry, she cared for her mother through most of her own mature years and later adopted an orphaned grand-nephew. The first of her books, *Under the Sea-Wind*, was published late in 1941, but aside from some welcome critical acclaim it went almost unnoticed in the uproar that followed Pearl Harbor.

It was not until 1951 that the general public came to share the admiration of critics and scientists for Carson's many skills. She had chosen as her subject nothing less than the sea itself, and when her book, *The Sea Around Us*, appeared, the response stunned even this artist-scientist. The book remained on the best-seller list of 86 weeks, was picked up by book clubs and magazines, and was translated into 33 foreign languages. "Great poets from Homer down to Masefield have tried to evoke the deep mystery and endless fascination of the ocean," the New York Times said of her book. "But the slender, gentle Miss Carson seems to have the best of it. Once or twice in a generation does the world get a physical scientist with literary genius. Miss Carson has written a classic in *The Sea Around Us*."

Though celebrity terrified her at first, she learned to deal with it. She was one of those writers who inspire affection as well as respect among her readers, and certainly a reason for the painfully slow pace at which she wrote her later books was the bulky correspondence she insisted on responding to with courtesy and thoroughness. Moreover, she had the unique ability to transform, through the alchemy of her prose, cold scientific facts into the stuff of wonder and delight. "The pleasures, the values of contact with the natural world are not reserved for the scientist," she wrote. "They are available to anyone who will place himself under the influence of a lonely mountain top -- or the sea -- or the stillness of a forest; or who will stop to think about to small a thing as the mystery of a growing seed."

Carson's stature grew in succeeding years with the re-publication of *Under the Sea-Wind* and the writing of a new book, *The Edge of the Sea*. A future full of honors and tranquility seemed assured to her. But late in the 1950's something began to gnaw at her, a sense

that events in the world had taken an ominous turn, that mankind in its ingenuity and arrogance had suddenly gotten hold of the power "to change drastically -- or even destroy -- the physical world."

Her own wide reading and her conversations with other scientists led her to focus on the misuse of chemical pesticides as the symbol of what had gone wrong. Only a few years earlier those new chemicals, especially DDT, had been hailed as humanity's savior, weapons that would finally solve the age-old problems posed by noxious insects and other pest organisms. Massive doses of the new chemicals, often spread by planes, became the prescription for all pest problems. It became apparent after a while that many kinds of animals besides insects were affected by the chemicals, and, as Carson realized, no one had any idea of their ultimate effect on the foundations of life itself. "I may not like what I see," she wrote, "but it does no good to ignore it, and it's worse than useless to go on repeating the old 'eternal verities' that are no more eternal than the hills of the poets. So it seems time someone wrote of life in the light of the truth as it now appears to us."

At first she had no intention of writing a book about pesticides. She suggested the idea to others, but got little response. Eventually it became clear that she was the leading candidate to tackle the subject, for no one else had such excellent credentials -- her scientific background, her love for the natural world, her writing skill and her stature in American letters. The "brief book" on the subject that she had envisioned grew as she began to dig into the evidence that mankind had badly misused these toxic substances. Despite the fact that she was already suffering from the illness that would kill her, she pushed on for four years -- reading, asking questions, writing and re-writing. When her book, *Silent Spring*, was published in 1962, the uproar it caused and the influence it exerted was compared to that of an earlier classic, Harriet Beecher Stowe's *Uncle Tom's Cabin*.

Why was a writer who spoke out against the contamination of the environment so savagely attacked from many quarters? In part it was because of the nature of her subject. Chemical pesticides, used in the right way, have been a valuable tool, increasing agricultural production and protecting human lives. A number of men and women of good will saw in *Silent Spring* an attempt to turn back the clock, depriving humanity of a weapon against pests at a critical moment in history. But Carson did not call for the abandonment of all chemical pesticides. She asked for a ban on the more insidious, long-lasting chemicals like DDT, against which there was increasing evidence of harmful effects to many living things. She asked also that the other chemicals be used more judiciously and that the regulations for their manufacture and sale be considerably tightened. Finally, she asked that scientists redouble their efforts to find alternative methods for fighting pests, such as biological controls, so that the flow of deadly poisons into the environment might be restricted.

Despite the initial flood of hostile criticism, Carson's argument had stood the test of time. As early as 1963, President Kennedy's Science Advisory Committee substantially supported her position that pesticides were being misused in this country. Laws and regulations have been tightened, and most of the chemicals whose use she criticized have been banned.

Her investigation of the threatened roots of life was so profound, and her voice so eloquent, that her message carried beyond the specific problem of pesticide use. "There is no question," a government expert on natural resources said following her death, "that *Silent Spring* prompted the Federal Government to take action against water and air pollution -- as well as against the misuse of pesticides -- several years before it otherwise might have moved."

Serious questions remain about the long-term effects of environmental contaminants on life. Despite many changes for the good, Americans now apply more than twice the amount of pesticides they did before *Silent Spring* was published, and totals also are increasing around the world. But the dialogue about the benefits and hazards of their use will never be quite the same. The voice of one woman opened the "Age of Ecology," prompting other people in all walks of life to insist on working toward a clean environment for ourselves and the creatures with which we share the Earth. Perhaps David Browner, an eminent conservationist in his own right, best summed up Rachel Carson's achievement: "She did her homework, she minded her English, and she cared."