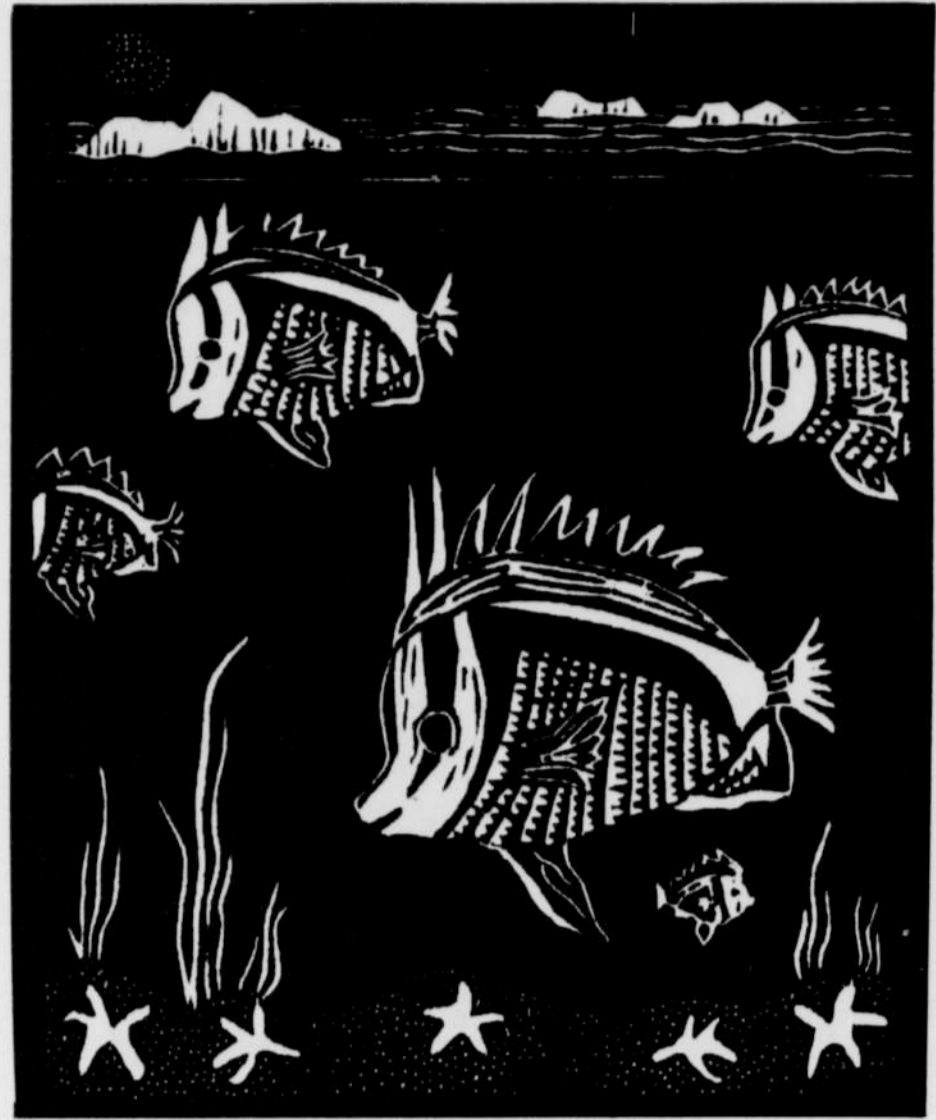




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# THE POLITICS OF RACHEL CARSON

BY ELLEN LEOPOLD

*Lost Woods: The Undiscovered Writing of Rachel Carson*, edited with an introduction by Linda Lear (Beacon Press, 1999) brings Rachel Carson back into the public realm. This collection of her writings, selected by her biographer Lear, reminds yet again of the extraordinary range of her talents and the equally extraordinary use to which she put them. The book offers, in one modest volume, a taste of all the pleasures to be found in Carson's longer works. Through a careful choice of speeches, articles, field notes, and letters, presented in chronological order, Lear allows us to witness in Carson's own words, her transformation from a natural scientist to a political advocate for the environment.

Much of the first half is devoted to brief pieces of Carson's nature writing that illustrate her reverence for the mysteries and great antiquity of life. Writing of the role of winds and air currents in populating island ecosystems, Carson tells us that "airmen have passed through great numbers of the white, silken filaments of spiders' parachutes" at heights of two to three miles. The migrations of the Chesapeake eels are equally miraculous. After 10 or 20 years of contented life among the mud banks and marshes, they take it upon themselves to return to their breeding grounds, a thousand miles away in the Sargasso Sea. What guides them in their air travels is still unknown. In the air, the annual migrations of birds mirror the same curious journeys undertaken by eels and other fish in the sea. Carson describes the evolution of richly varied island life over millions of years as the "stocking of an island." The stories she tells of living creatures guided by unfathomable impulses serve in a parallel way to "stock" our imaginations. There is, apparently, an infinite number of solutions to the challenge of life.

As Linda Lear aptly describes her in the subtitle of her biography, Carson was a "witness for nature." In describing the patterns of the winds or sea currents or the habits of larvae, she writes as a transparent narrator, conveying her own fascination with the subject without drawing attention to herself. She puts nature center stage, emphasizing the complex processes of life evolving eons before the arrival of humans. These enduring life-forms negotiate their environment in ways wholly foreign to human beings — and they have been doing so for much longer. By trying to get to their perspective on life, Carson continually adjusts the angle on *our own*. Her distress at the consequences of human warfare, for instance, is focused not on the decimation of human lives but on the damage or destruction of wildlife for which both sides in any of conflict are responsible. (In the war in the Pacific in the 1940s, for example, planes killed thousands of birds, especially those flying at night; other large birds like albatrosses and petrels fell into foxholes where they starved to death.)

Carson's obligations were to the natural world as a whole rather than to any one tribe within it. She was no more likely to discriminate among Linnaean classes of invertebrates than among Marxist classes of vertebrates. Her politics were ecological, not ideological. She perceived the relationship of organisms to their environment as a continuous chain of events, in which every link played a critical role, rather than as a series of decisive struggles between the weak and the strong. The disruption of this continuity, through "man's habitual tampering with Nature's balance," had not one but many victims, to be found at every point along the food chain. Leaves sprayed with pesticides fell to the ground and became food for earthworms. The following spring, robins consumed a lethal dose of those earthworms and died.

Granting no special privileges to human beings freed Carson from a narrowly instrumental view of nature that saw the earth as a vast repository of wealth to be exploited and appropriated by humans. For Carson, proper stewardship came first; ownership became an issue only when it conflicted with nature's capacity to renew itself unharmed. Carson did not object to land being held in private hands, minerals being mined, wilderness being claimed for agriculture, or even to pesticides being used — occasionally and sparingly. She did object to irresponsible interference with natural resources for short-term gain (political or economic) that turned its back, with impunity, on the long-term consequences for the environment. Gradually, as her concerns brought her ever closer to the driving forces behind the widespread destruction of natural life, she understood that much

more was at stake and that she would have to take her private passions into public — and political — arenas.

The transition between Carson as observer and Carson as activist is marked in *Lost Worlds* by a letter she wrote to the Washington Post in 1953. It protested the sacking of professional conservationists from high-level government posts in the Fish & Wildlife Service and the Bureau of Land management by newly elected Republicans. Their replacement with political appointees boded ill for "the real wealth of the Nation...the resources of the earth — soil, water, forests, minerals and wildlife." The heavy-handed intervention suggested to Carson that the way "was being cleared for a raid upon our national resources...The proposed giveaway of our offshore oil reserves and the threatened invasion of national parks, forests and other public lands." Writing at the height of McCarthyism, Carson concluded, "It is one of the ironies of our time that, while concentrating on the defense of our country against enemies from without, we should be so heedless of those who would destroy it from within."

Carson fired off another letter to the Post in 1959, in response to an editorial discussing the effects of an extremely harsh winter on migrating birds. This was the first public salvo in her war against the indiscriminate use of pesticides. (*Silent Spring* was published three years later.) In a preface to the second edition of *The Sea Around Us*, Carson highlighted the dangers of "a problem that is far more complex and far more hazardous than has been admitted...The truth is that (radioactive waste) disposal has proceeded far more rapidly than our knowledge justifies. To dispose first and investigate later is an invitation to disaster..."

Carson could just as easily have been warning of the premature applications of pesticides as the dangers of waste disposal at sea. In both cases, scientific prudence had been sacrificed, as she put it in a speech to the Women's National Press Club, "to serve the gods of profit and production." Strategies had been adopted, synthetic chemicals had been released into the land, the air, and the sea before science had determined that they were safe. The demands of industry and commerce were simply too urgent and too powerful to be tethered to the overcautious concerns of the public health officer. It was much easier simply to assume that chemicals were innocent until proven guilty than to await the scientific all-clear.

Rachel Carson was one of the first scientists to recognize the difficulties that this would present to those seeking to curb the use of toxic chemicals. Conventional science traditionally tests substances one at a time. The prospect of ever being able to disentangle the effects of multiple exposure to thousands of different chemicals in order to identify the risks associated with each one individually is close to nil. But the lack of evidence demonstrating toxicity does not guarantee that a substance is not toxic, simply that the conventional approach to science makes such an assessment impracticable. Not surprisingly, there is no "data" at all on the most suspected carcinogens.

*Sound science*, therefore, has become the refuge and rallying cry of the chemical industries. For the great majority of potentially harmful chemicals, it is tantamount to *no science*. For the small majority of cases where it can be put to use, the tool of choice is risk assessment applied to cost/benefit analysis. Developed as an environmental tool in the 1970s, risk assess-

ment vastly overestimates the ability of science to predict harm in what are extremely complex ecological and human systems. It is used to quantify and manage risk, not to eliminate it; and asks what levels of exposure are safe rather than how to move toward cleaner alternatives. Most of the assumptions it makes — about exposures, dose-response, extrapolations from animals to humans — are based on subjective and sometimes arbitrary decisions. Yet it provides a respectable cover for all kinds of environmental posturing. The same Al Gore who wrote a glowing introduction to an anniversary edition of *Silent Spring* cited "sound science" to justify the creation of an advisory panel that effectively delayed the phasing-out of several pesticides — all used heavily in states (such as California, Florida, Texas and Iowa) that are key to Gore's election campaign. Environmental and public interest groups quit the panel in 1999, citing the EPA's unwillingness "to make hard choices."

To the idealistic Carson, the solution to this dilemma was to forestall the possibility of harm by withdrawing or withholding from use any substance not proven to be safe. "The burden of proof," Carson argued in her last public appearance, "is on those who would use these chemicals to prove the procedures are safe." This strategy has now been elaborated in the Precautionary Principle, a decision-making tool honed at a conference of activists, scientists and scholars in Wisconsin in 1998. It argues that legislation does not need to wait upon science and that, even in the context of scientific uncertainty, polluters should be made to demonstrate both a clear necessity to undertake any hazardous activity and the absence of any safer alternative.

Older environmental strategies that played the "science" game and relied upon risk assessments to make their case have clearly met with limited success. The production of pesticides has increased by 400% since the publication of *Silent Spring*. Their widespread use leads to roughly 110,000 poisonings and 25 recorded deaths annually. Routine agricultural spraying kills 67 million birds a year — a fact which would be particularly distressing to Rachel Carson.

Agribusiness is now much better organized than it was in Carson's day. The lobbying of chemical corporations (whose tax-deductible status Carson vehemently objected to in the early 1960s) now wields influence on a scale she would find unimaginable. As a contender, the Precautionary Principle seems a thin reed, unlikely to stand up to gale-force lobbying by the chemical industry. Yet its proponents argue that it is already embodied in many current policies. The United States, they argue, did sign and ratify the Rio Declaration, binding on the Environmental Protection Agency (EPA), at the United Nations Conference on Environment & Development in 1992. This stated: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

But that "cost-effective" — there's the rub. Inserted at the insistence of the U.S. delegation, it makes clear that where the demand for "scientific certainty" fails to protect corporate interests, the underlying economic imperatives that it serves will move to the fore. Of course, the use of cost/benefit analysis guarantees that the ball will remain in the profit-maximizers' court.

Still, in the absence of any more hard-hitting campaigns to control the spread of toxic chemicals, the Precautionary Principle today may be no more quixotic than the gauntlet thrown down by an independent woman scientist in a book written almost 40 years ago. *Lost Woods* reminds us again of the scale of the opposition Carson faced and of the very improbability of her success. This is a message we need to hear.

Ellen Leopold is the author of *A Darker Ribbon: Breast Cancer, Women & Their Doctors in the 20th Century* (Boston: Beacon Press, 1999). The book includes the correspondence of Rachel Carson, who died of breast cancer in 1964, and her consultant, George Crile Jr., M.D. This article has been reprinted from the Anderson Valley Advertiser.

Nancy Ann Kem was an artist and art teacher at Astoria High School. She was born in 1931 and died in 1997. "She was an artist who taught," her friend Nancy Spaan said. "She was a teacher's teacher. In her world there was no room for violence, bigotry or prejudice. There was also no room for indifference."

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