

Using a Plague to Fight a Plague



THE AUTHOR: Although she has the \$300 million pesticide industry in an uproar, Rachel Carson refuses to be cast as a tub-thumping, hatchet-wielding female reformer. She loathes personal appearances, has a deep sense of privacy, and still finds it difficult to believe she is a leading public figure.

What drove her to give up her relatively serene existence and accept the penalty of leadership? "For years there has been a steady stream of statements aimed at promoting ever-increasing use of insecticides, but practically nothing has been said

about the risks we are running or the trouble we are creating in our world. The other side of the story needed desperately to be told. It is ironic to think that man may determine his own future by something so seemingly trivial as his choice of an insect spray."

After hearing her lecture last year a *Washington Post* reporter suggested that the human race might be less apt to "go out with a nuclear bang than with the hiss of Aerosol bombs." Asked about the relative dangers of the two contaminants, Miss Carson said, "I won't equate the nuclear fallout hazard with that of poisonous insecticides, but I do think they are interrelated, combining to render our environment progressively less fit to live in."

Even before her book came out, agricultural chemical concerns, agitated as a hornet's nest hit by a DDT bomb, had set the wheels of counter-attack into motion. Their scientists analyzed line-by-line *The New Yorker* articles excerpted from the book and published last summer. Meetings were hastily called. Statements were drafted. News releases issued. Thus far no one has been able to refute Miss Carson's facts and case histories painstakingly gleaned during four and one-half years of research.

In the face of all this furor Rachel Carson remains immaculately calm, detached, self-sure. But if her detractors don't faze her, the fan mail does. (A *New Yorker* editor estimated the mail response was probably the largest since John Hersey's "Hiroshima"—"phenomenal!") The Department of Agriculture has been deluged by letters expressing, as one spokesman called it, "horror and amazement." Congressmen Proxmire, Lindsay, and Green read portions of the work into the *Congressional Record*. President Kennedy announced at a recent press conference that the government was taking a closer look at the long-range side effects of pesticides—"particularly, of course, since Miss Carson's book."

Long since retired from government service as a biologist, Rachel Carson yearns to return to nonpolemical nature writing. When she will be able to is entirely dependent upon when her self-imposed duties as public advocate can be shifted to other shoulders. She has agreed to address a few groups this winter, although she dreads public speaking and will probably lose up to thirty pounds during the coming ordeal. (She lost twenty after "The Sea Around Us" came out.)

A young-voiced, gentle lady who has never married or been out of the country, who never saw the sea until she was an adult, and has only been to sea once, Rachel Carson, at fifty-six, has become what she dreaded most: a controversial celebrity. A month before the book's publication fifty-two editorials and twenty columnists had discussed her work. The *New York Times's* editorial is fairly typical: "Miss Carson will be accused of alarmism . . . of showing only the bad side of pesticides while ignoring their benefits. But this, we suspect, is her purpose as well as her method. . . . If she helps arouse enough public concern to immunize government agencies against the blandishments of the hucksters and enforce adequate controls, the author will be as deserving of the Nobel Prize as was the inventor of DDT."

—MARY KERSEY HARVEY.

"Silent Spring," by Rachel Carson (*Houghton Mifflin*, 368 pp. Index. \$5), warns that indiscriminate use of chemical pest-killers threatens the existence of our birds, fish, farm animals, and, ultimately, ourselves. Loren Eiseley, professor of anthropology and history of science at the University of Pennsylvania, wrote *"The Immense Journey"* and other works on natural history.

By LOREN EISELEY

A FEW days ago I stood amidst the marshes of a well-known wildlife refuge. As I studied a group of herons through my glasses, there floated by the margin of my vision the soapy, unsightly froth of a detergent discharged into the slough's backwaters from some source upstream. Here nature, at first glance, seemed green and uncontaminated. As I left, however, could not help wondering how long it would be before seeping industrial wastes destroyed the water-life on which those birds subsisted—how long it would be before poisonous and vacant mudflats had replaced the chirping frogs and waving cattails I loved to visit. I thought also of a sparkling stream in the Middle West in which, as a small boy, I used to catch sunfish, but which today is a muddy, lifeless treacle filled with oil from a nearby pumping station. No living thing now haunts its polluted waters.

These two episodes out of my own experience are trifling, however, compared with that virulent facet of man's activities treated in Rachel Carson's latest book. It is a devastating, heavily documented, relentless attack upon human carelessness, greed, and irresponsibility—an irresponsibility that has let loose upon man and the countryside a flood of dangerous chemicals in a situation which, as Miss Carson states, is without parallel in medical history. "No one," she adds, "yet knows what the ultimate consequences may be."

"Silent Spring" is her account of those floods of insecticides and well-intentioned protective devices which have indiscriminately slaughtered our wildlife of both forest and stream. Such ill-considered activities break the nec-

essary food chains of nature and destroy the livelihood of creatures not even directly affected by the pesticides. The water run-off from agricultural and oversted areas carries to our major rivers and to the seas chemicals which may then impregnate the food we eat. We have no assurance that we are not introducing into nature heavy concentrates of non-natural substances whose effects are potentially as dangerous as those that came to light in the dramatic medical episode that shocked the public in recent weeks. I refer, of course, to the foetal monsters produced by the sleep drug Thalidomide. Imperfect though the present legal controls in the field of direct medical experiment may be, they are less inadequate than in the domain of agricultural chemistry, where aerial spraying is cascading a rain of poison over field and farmland.

D'Arcy Thompson, the great British biologist of the late nineteenth century, commented astutely in 1897 that the increasing tempo of human cultural evolution produces a kind of evolution of chance itself—an increasing dissonance and complexity of change beyond what one finds in the world before man came. Though this evolution of chance arises within the human domain, it does not long remain confined to it. Instead, the erratic and growingly unpredictable fantasies created in the human mind invade nature itself. Tremendous agricultural productivity is correlated with the insatiable demands of ever-growing populations. Wastes in the air and wastes polluting the continental arteries increasingly disrupt the nature that we have taken for granted since the first simple hunters wandered out of the snowy winter of the Ice Age and learned to live in cities.

Man's sanitary engineering, in western civilization, never amounted to much until the middle phase of the industrial revolution and the discovery of the relation of bacteria to disease. Now it is apparent that man must learn to handle more wisely the products of his own aspiring chemistry. He is faced with the prospect of learning to be a creative god in nature without, at the same time, destroying his surroundings and himself through thoughtless indifference to the old green world out of which he has so recently emerged and to which (though he forgets) he is as indissolubly bound in his own way as the herons that stalked before my field glasses.

Essentially there are two ways of approaching the control of noxious insects: a natural and a chemical means. I am deliberately confining my remarks here, not to the effect of man's accidental industrial wastes upon his environment—a subject worthy of atten-

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A Sampler

Excerpts from "Silent Spring"

FOR EACH of us, as for the robin in Michigan or the salmon in the Miramichi, this is a problem of ecology, of interrelationships, of interdependence. We poison the caddis flies in a stream and the salmon runs dwindle and die. We poison the gnats in a lake and the poison travels from link to link of the food chain and soon the birds of the lake margins become its victims. We spray our elms and the following springs are silent of robin song, not because we sprayed the robins directly but because the poison traveled, step by step, through the now familiar elm leaf-earthworm-robin cycle. These are matters of record, observable, part of the visible world around us. They reflect the web of life—or death—that scientists know as ecology.

THE CITIZEN who wishes to make a fair judgment of the question of wildlife loss is today confronted with a dilemma. On the one hand conservationists and many wildlife biologists assert that the losses have been severe and in some cases even catastrophic. On the other hand the control agencies tend to deny flatly and categorically that such losses have occurred, or that they are of any importance if they have. Which view are we to accept?

The credibility of the witness is of first importance. The professional wildlife biologist on the scene is certainly best qualified to discover and interpret wildlife loss. The entomologist, whose specialty is insects, is not so qualified by training, and is not psychologically disposed to look for undesirable side effects of his control program.

PRESUMABLY the weed is taking something from the soil; perhaps it is also contributing something to it. A practical example was provided recently by the parks in a city in Holland. The roses were doing badly. Soil samples showed heavy infestations by tiny nematode worms. Scientists of the Dutch Plant Protection Service did not recommend chemical sprays or soil treatments; instead, they suggested that marigolds be planted among the roses. This plant, which the purist would doubtless consider a weed in any rosebed, releases an excretion from its roots that kills the soil nematodes. The advice was taken; some beds were planted with marigolds, some left without as controls. The results were striking. With the aid of the marigolds the roses flourished; in the control beds they were sickly and drooping. Marigolds are now used in many places for combating nematodes.

THE WORLD of systemic insecticides is a weird world, surpassing the imaginings of the brothers Grimm—perhaps most closely akin to the cartoon world of Charles Addams. It is a world where the enchanted forest of the fairy tales has become the poisonous forest in which an insect that chews a leaf or sucks the sap of a plant is doomed. It is a world where a flea bites a dog, and dies because the dog's blood has been made poisonous, where an insect may die from vapors emanating from a plant it has never touched, where a bee may carry poisonous nectar back to its hive and presently produce poisonous honey.

It is not my contention that chemical insecticides must never be used. I do contend that we have put poisonous and biologically potent chemicals indiscriminately into the hands of persons largely or wholly ignorant of their potentials for harm. We have subjected enormous numbers of people to contact with these poisons, without their consent and often without their knowledge. If the Bill of Rights contains no guarantee that a citizen shall be secure against lethal poisons distributed either by private individuals or by public officials, it is surely only because our forefathers, despite their considerable wisdom and foresight, could conceive of no such problem.

I contend, furthermore, that we have allowed these chemicals to be used with little or no advance investigation of their effect on soil, water, wildlife, and man himself. Future generations are unlikely to condone our lack of prudent concern for the integrity of the natural world that supports all life.

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Opening Night at WNDT

NEXT to Telstar, the biggest news in the world of communications this year was the opening last week of a non-commercial television station in the New York metropolitan area (WNDT), serving fifteen million people. The new station was long overdue; sixty-seven American communities were ahead of the New York area in establishing educational TV.

New York's delay was not a matter of indifference or procrastination. The main difficulty was represented by the lack of a broadcasting channel. All the existing VHF channels had been assigned to commercial outlets—without charge—by the Federal Communications Commission, which meant that one had to be bought. This resulted in a monstrous paradox. While commercial TV could get started without the penalty of a massive initiation fee, educational TV had to go through a \$7 million wringer and five years of exhausting negotiations just to hang out its shingle.

The negotiations for Channel 13 were complicated by the fact that this was the only commercial TV wave length assigned to the entire state of New Jersey. (New York City alone had six.) Understandably, New Jersey protested—not against the idea of educational television facilities per se, but against the idea that it would be deprived of its only TV channel.

For a time, it appeared that New Jersey's objection might prevent or at least substantially postpone the culmination of the sale. But reasonable men eventually got together and worked out an effective solution. They included

Governor Robert B. Meyner of New Jersey; Richard D. Heffner, general manager of the prospective station; and Joseph S. Iseman, counsel for the Metropolitan ETV Board.

For its new president, WNDT was able to engage Samuel B. Gould, former chancellor of the University of California at Santa Barbara. The date set for beginning the regular programming was September 17, with a premiere the previous evening.

Then the roof fell in. On September 16, only hours before the premiere, the American Federation of Television and Radio Artists went on strike against the new station. It demanded jurisdiction over all those taking part in the television programs, even though these people were teachers or philosophers or writers or non-entertainers in general. Operating a station under these conditions was ludicrous and impossible, and the station management said so. AFTRA threw a picket line around the offices and studio, with the result that engineers, technicians, cameramen, etc., who belonged to unions with which WNDT had contracts, were unavailable for opening night. Dr. Gould and Mr. Heffner decided to go on with the premiere, even though they would have to postpone the regular programming. They had behind them the encouragement of their nontechnical personnel, from executives and secretaries to office boys, who said they would man all the technical stations.

It was a heroic decision—and it worked. The entire premiere went off as originally planned, with only one or two operational miscues. Edward R.

Murrow was master-of-ceremonies; Newton N. Minow, chairman of the FCC, gave the station a warm send-off; Dr. Gould spoke of the basic purposes of the new enterprise, explained how it differed from commercial TV, and announced that because of the strike the actual operations of the station were being indefinitely postponed. Other elements in the program consisted largely of a sampling of things to come. Concerning this, more below.

It is not extreme to say that American labor has been given a black eye by the punitive and arrogant action of AFTRA in blocking the opening of non-commercial TV in the metropolitan area. In rejecting AFTRA's demands, Dr. Gould emphasized that it would be impossible to undertake imaginative, varied programming if all the people who appeared before the cameras had to join and pay dues to AFTRA even though they were not professional performers or entertainers.

A labor union, like a government agency or a newspaper or magazine or broadcasting station, operates in the public arena and ought not to be detached from public opinion. We see no reason why citizens who feel strongly about the matter should not make their views known to AFTRA. The public is directly involved and should not hesitate to send telegrams or letters to the head of AFTRA, Mr. Kenneth Groot, at 724 Fifth Avenue, New York. This is not just a matter of concern to metropolitan residents. The entire cause of non-commercial television across the country is affected by what happens to this showcase station.

Concerning the content of WNDT's premiere: we wish we could report it an artistic success. Unhappily, the program was spotty and, in some instances, poorly conceived and edited. There was an opportunity here to raise a dramatic curtain and provide a glimpse, however brief, of the rich and varied materials which are known to be in the ETV treasury. Much of the material shown, however, was far from impressive. Some of it was in dire need of cutting. Some of it was pretentious, even when the subject was artistic whimsy. Some of it lacked the sense of excitement and newness that people have a right to expect at a premiere. The evening's program, taken as a whole, lacked balance and luster.

In sum, non-commercial television in New York is off to a slow start. Once the union difficulties are cleared away—and the public has an important role to play in this connection—WNDT will have the opportunity to demonstrate the kind of imaginative flair and professional skill that have long been associated with the talented men who are directing the station.

—N.C.