



The Recess: the Laboratory, the Streets and the Government

Spokesmen for the DDT industry often talked in derisive terms of the "bird watcher" scientists who comprised the bulk of the petitioner's forces, and of the distance between those lofty academic personages and the realities of the world. But that world's realities burst upon the scene in a number of ways during the Madison hearings.

The University of Wisconsin has not built up a reputation as the most placid campus in the nation and has often vied with Berkeley as the place most likely at any given moment to have a riot—and those given moments occurred again and again. During the first week of the hearings, when proceedings were still being held in the State Capitol Building, the Hearing Examiner made formal acknowledgment of a "commotion" going on outside the hearing room. This innocuous acknowledgment gave no indication that the commotion was being made by hundreds of angry students trying to force their way into a meeting of the State Board of Regents to protest the expulsion of 100 black students from Oshkosh State College.

But that demonstration was just a warm-up. In February the campus erupted with a strike over the demands of campus blacks which featured, before it ran its course, the calling in of the National Guard to protect all matter of living and non-living things except striking students, and the gentle bathing of the town in tear gas. Then in April, while arguments both subtle and direct were taking place inside the DDT hearing room, firebombs were being tossed and heads cracked in what was at the time the biggest single uprising in Madison's history.

Attitudes toward these commotions and those causing them varied greatly within the anti-DDT coalition, running the gamut from those petitioners who felt basically sympathetic with the students to those who felt basic hatred toward them. (Some of the members of the coalition were people who felt politically and socially more at ease with the gentlemen of industry than with the amalgam of beards and youth.) Yet, one of the more significant developments in what promises to become the student ecological battle of the 1970's surfaced as the result of those Madison hearings. It was there that the first

ecological activist tactics of the current fad took place, with the formation of the DDT Commandos. These Commandos were the action arm of the Conservation Research and Action Project (CRAP), in turn a spin-off of the University Science Student Union, a group of some Wisconsin radical science undergraduate and graduate students concerned about the use and misuse of science in society.

The hearings, with their national publicity, naturally attracted the interest of the Science Union, and almost every day bearded, be-draggled radical students could be seen avidly watching the goings on. From their interest in the hearings came CRAP, and CRAP's first move was to sic the Commandos on the proceedings.

The group's actions on that winter day were pure guerrilla theatre. About 25 students, dressed in makeshift commando costumes, and armed with placards emblazoned with such revolutionary slogans as "Liberate the Ecosystem," "Get the Crap out of the Environment," and "Ban the Bug Bomb," invaded the decorous State Capitol Building after marching on or, rather, stealthily attacking it from a nearby area of the campus. These Commandos carried water guns, claimed to be filled with DDT, that they proceeded to squirt at everything in sight. So, in best Western melodrama style, a Wisconsin Marshal disarmed them at the door of the hearing room, and forced the ferocious fighters to stack their water weapons. Of course, while much of the student population of Madison flipped at the Commandos' actions and the media men outdid each other taking pictures, the coalition sternly disapproved. Even Yannacone drew the line and, feeling that the Commandos were jeopardizing the proceedings, requested that they wage war in other areas. Industry, too, took the Commandos and their cohorts seriously, going to the length of editorializing in one of their trade publications that the Commandos and the scientists testifying for the anti-DDT coalition were equatable. Nevertheless, the Commandos planned further action for the spring, but the vicious street fighting which broke out in Madison at that time took away the initiative to have such fun.

Shortly after the winter "DDT offensive" which successfully brought the Commandos to the doors of the hearing room, the hearings were moved to another location some three miles from the University.

But, while student antics were providing comic relief to the proceedings, another event was occurring in neighboring Michigan which directly affected widespread public feeling about DDT.

Predictions of this event were heard in the 1968 trial before the Michigan Court of Appeals when Dr. Wurster prophetically testified that the levels of DDT and dieldrin being found in the Lake Michigan ecosystem would be enough to affect the reproduction of its coho salmon. In the most ambitious fish transplanting endeavor ever accomplished, these West Coast salmon were introduced into Lake Michigan to replace the lake trout which had been almost annihilated

by the sea lamprey. At first, the salmon thrived almost beyond the wildest dream of the wildest fishery biologist, and soon Michigan was planning on a tourist-attracting industry that would increase the state's coffers by millions of dollars every year. But Wurster was proven frighteningly right; the death of a million coho fry the next spring was attributed to DDT.* As could be expected, this caused quite a stir among conservationist anglers. But the full implications of these DDT levels were not apparent even then; things were to get worse.

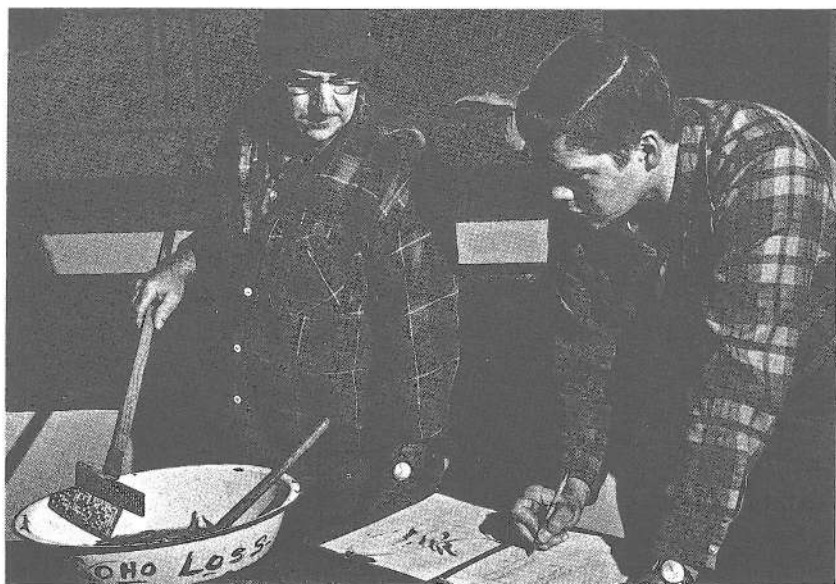
In February 1969, the pesticide level in a can of coho salmon was routinely checked by the Consumer Protection Division of the Michigan Department of Agriculture. It was found to have a dieldrin level of .32 parts per million. At that time, there was no official Federal Food and Drug Administration tolerance level for DDT in fish; however, the FDA had established a guideline level in fish of 0.3 ppm for dieldrin, a chlorinated hydrocarbon similar in environmental characteristics to DDT. A "Stop Sale" was immediately placed on 146 cases of salmon from that specific lot, and the Consumer Protection Division investigated further lots for high dieldrin level. According to Dr. George Whitehead who headed the department, they found no other cans which exceeded .3 ppm.

What the doctor neglected to mention, however, was the positively astounding levels of DDT, ranging up to 50 ppm, in those cans; those figures were stamped "confidential," and the public was not to learn about them until the affair exploded three months later during the Madison recess. Dr. Whitehead claimed afterward that he did nothing about the excessively high DDT levels because the federal government, whose guidelines he accepted on dieldrin, had not released tolerance figures for DDT. But, as some critics harshly said after the affair came into the open, with the FDA tolerance level for DDT in beef at 7 ppm, what was Whitehead waiting for?

Tom Brown, director of the FDA regional office in Detroit, unlike Whitehead, did not wait for an official tolerance level to be established. Despite the absence of a guideline level, he moved in and banned the sale of 32,000 pounds of coho salmon on the grounds of potential danger to human health. He claimed that he didn't wish to wait three years and then find out that the fish were dangerous. As could be expected, the uproar was fantastic. The public health agencies said that there was no proof that the fish presented a danger to human health; the agricultural department in Michigan coyly said that there was no real reason to ban DDT; the public and the Michigan Department of Natural Resources under Ralph MacMullan, a persistent foe of persistent pesticides, bellowed that the stuff must go.

As a result of the outcry, two weeks after the FDA banned the sale of the salmon, the Michigan Department of Agriculture's executive board met and banned DDT.

*DDT kills the fry after they have hatched but before they fully resorb their yolk sacs.



Perhaps, as with every disaster, natural or man-made, no one believed it would happen.

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Even before Michigan knocked DDT off its shelves, some 6,000 miles away, the National Poisons and Pesticides Board of Sweden decided that the Scandinavian environment had all of the chlorinated hydrocarbons that it should have and announced a ban on DDT use for two years, a ban that everyone in the country expected would last indefinitely. The Board also decided to ban the use of diedrin and aldrin in Sweden as well.

At a conference held by the board which terminated in DDT's demise, a Swedish scientist, Dr. Oden, estimated that the total amount of DDT and its metabolites in Sweden's soil was 2,000 metric tons—probably more than had ever been used in that country. But perhaps the most important testimony at the Swedish hearing came from a man who was to figure prominently at Madison, Dr. Goran Lofroth. This young scientist testified that DDT from foods and from the environment was pervading the Swedish biosphere to such an extent that it was appearing in sizable amounts in human milk. In a country where breast feeding is common, this aroused the ire of many a household.

Dr. Wayland Hayes, a representative of the DDT industry and a long time defender of the human non-toxicity of DDT, appeared in Sweden to refute the quickly accumulating evidence. Hayes's data had long been a stumbling block for the foes of DDT. In the past, scientific opposition to the chemical had often dissipated in the face of his

evidence based on experiments which he conducted in the United States during the 1950's on prisoners and workers in pesticide factories. But at the Swedish hearing Hayes and Lofroth cracked heads, and Lofroth emerged as the winner by a knockout.

So, with a conclusive win already on the records, Lofroth was booked for a second scientific confrontation with Hayes at Madison. And again, although the result was less conclusive, most outsiders agreed that Lofroth, by showing the degree that DDT has pervaded human life and by casting grave doubts on Hayes's cant of the innocuousness of the pesticide, came out on top.

Of course with any sort of controversy raging, California was sure to jump in with flourishes of its own. All sorts of bills regulating and banning the use of chlorinated hydrocarbons were bandied around the state legislature. Heated arguments erupted pitting various departments of the various state universities against each other. (As an interesting sidelight here, Ray Smith, head of one of the most prestigious departments of entomology in the world, the one at Berkeley, came out against a bill banning DDT while his most prominent pupil, Robert van den Bosch, was testifying in behalf of the petitioners in Wisconsin.*)

The long-raging grape pickers, schism causers for several years in the California social scene, found an issue within an issue with DDT. Led by Caesar Chavez, the grape strikers claimed that DDT along with other pesticides was poisoning not only them but the grapes themselves. The grape pickers then made an attempt to get information on pesticide use from the County Agricultural Commission in Delano, headquarters of the strike, only to learn the information was considered by California to be "proprietary" and thereby more important in itself than were the lives of the workers.

Finally, a bill was passed in California which banned the use of DDT in dusting compounds and for household use. But this had little effect since something like 90 per cent of the DDT used in the state is applied in oil solutions.

Jumping on the anti-DDT bandwagon became a popular pursuit in a great many states during the recess. Maine restricted much of the pesticide's use as did Pennsylvania; Minnesota no longer allowed it to be used for Dutch elm disease control. Almost every state had some sort of pesticide control bill in the hopper before most were killed in agricultural committee. Illinois for instance passed a bill in its lower house 345-0 but the chairman of the Senate Agricultural Committee there, a man who admitted he didn't know awfully much about the chemical, allowed the bill to die in committee. Even Wisconsin did its thing by banning DDT for Dutch elm disease, thereby cutting its use by 50 per cent in the state.

But the hearings went on.

*See testimony, pages 115-126.