



THE WOODS HOLE RESEARCH CENTER

149 Woods Hole Road · Falmouth, MA 02540-1644 USA
Telephone 508.540.9900 · Fax: 508.540-9700 · www.wbrc.org

Eradicating Terrorism

by George M. Woodwell

October 19th, 2001

In the late 1950s and 1960s DDT and a series of other chlorinated hydrocarbon compounds were being widely used to protect crops and people from a wide range of insect pests. Although they were broadly toxic and persistent, they were called insecticides and sprayed widely around the world to control virtually any noxious insect. In the 1960s I lived on Long Island, New York, where the gypsy moth populations occasionally exploded to the point where they defoliated trees. The gypsy moth is not a human parasite, does not bite or otherwise affect people directly but is noxious in that it can defoliate oaks in particular which, after two or three successive years of defoliation, may die. It is distressing to live in an oak grove that is being defoliated by a gypsy moth plague, but it is not a hazard to human health or a serious economic burden.

There are various ways of controlling gypsy moth populations, including simply spraying favorite trees with a hose to wash the caterpillars off. But the US Department of Agriculture established a program to eradicate the gypsy moth. Eradication from Long Island was the objective, and during the 1950s the entire island was sprayed from the air with DDT. The public objected to having the entire island, including those places that were not infested - gardens, lawns, houses, lakes, and streams - sprayed indiscriminately. The objections were not heeded, and the island was sprayed with the only goal of "eradicating" the gypsy moth. However, the infestations continued, encouraged by the preservation of their food supply.

The resurgence of the gypsy moth after "eradication" brought forth an annual program of spraying supported by the Department of Agriculture using DDT. At the same time the Suffolk County Mosquito Control Commission was spraying from the air using DDT on the salt marshes to control the salt marsh mosquito. The net effect was the accumulation of DDT residues in the general environment to the point that there was conspicuous depression of bird and fish populations and significant accumulation of residues in food webs and soils.

It took a major court case on Long Island to force a pause in the use of DDT in the salt marshes and the formation of a non-governmental organization, the Environmental Defense Fund (now called Environmental Defense), with a concerted national effort at controlling the use of DDT and other persistent poisons to stop the Federal Government's national program and to control the use of DDT in general. Finally, after national hearings, the EPA Administrator in 1972 effectively banned the use of DDT in the United States.

The nation is now in pursuit of a program to eradicate terrorism globally. We have had a \$30-billion effort through the CIA and the FBI plus a significant effort through the State Department apparatus charged with keeping track of international relations around the world. That very systematic and detailed and well-financed information-gathering apparatus overlooked the most important development of recent years and failed totally in protecting the nation from a loosely knit and diffuse group of terrorists.



THE WOODS HOLE RESEARCH CENTER

*149 Woods Hole Road · Falmouth, MA 02540-1644 USA
Telephone 508.540.9900 · Fax: 508.540-9700 · www.wbrc.org*

Our response has been to expand the information gathering by \$20 billion and to turn the challenge over to a \$300-billion-per-year military apparatus to use guns and bombs and airplanes and rockets against an elusive and diffuse enemy.

We are raining high explosives on Afghanistan, hoping, as we did on Long Island, that the enemy will notice and succumb.

But the enemy has an ample population in nearby Pakistan, and probably elsewhere, where we are not waging our war or otherwise addressing the problem effectively.

And just as the war on insect pests has had a powerful political base in the petrochemical companies that manufacture chlorinated hydrocarbon pesticides, so has the war on terrorism a powerful industrial base in the weapons business. My guess is that we are going to be about as effective in addressing terrorism, using the techniques we are using at the moment, as we have been in controlling noxious insects using broad-spectrum pesticides applied totally inappropriately.

Far more effective in both instances is a careful look at the causes of the outbreaks, pests and terrorists. Pests are being controlled subtly by biological interventions that modify the environment in such a way as to strengthen natural resistance. Terrorists are to be controlled similarly by modifications of society that remove any need for or interest in terrorism. Poverty, the unfairness of governments in managing resources, predictable shortages of water and land, predictable effects of pollution, predictable pressures from exploding populations, predictable competition among ethnic groups for opportunities to live in peace, are all causes of the uprisings that we are seeing now as terrorism. The cures lie in addressing the fundamental problems of the world, which are problems of basic resources and their allocation through fair and responsive governmental systems. Indulgence in more murder, the spread of catastrophe, indulgence in state-supported assassinations, and random extermination of families and villages from afar only make more bitterness, more insatiable appetite for revenge, more basis for war. The lesson from biological control is profound and pervasive and a lesson that our political leaders desperately need to learn.