Malaria Carrying Mosquito Crash Lands Due to His Insecticide

Paul Müller was a chemist who made a discovery that led to the rapid decrease of many dangerous insect transmitted diseases. He did this by finding one of the most effective and controversial pesticides in history. It has been found to be effective in killing the mosquito, which spreads malaria; the louse, which spreads typhus; the flea, which spreads the plague; and the sandfly, which spreads tropical diseases. It was a main factor in complete elimination of malaria in Europe, the U.S., Japan, and Australia. This pesticide is called dichloro-diphenyl-trichloroethane, more commonly known as DDT.

Müller was an independent scientist often referred to in the labs as a lone wolf, or as his daughter related, an Eigenbrotler - someone "who makes his own bread." Two events occurred that influenced his research into insecticides. The first was a severe food shortage in Switzerland, which demonstrated the need for better insect control of crops. The second event was the Russian typhus epidemic, the largest typhus epidemic in history. Müller, with his background in chemistry and botany, found himself both motivated and prepared for the challenge.

He worked for J.R. Geigy (which eventually became today's drug giant Novartis), developing tanning methods for protecting clothes from insects, and a safe seed disinfectant that wasn't based on poisonous mercury compounds, as was common in his era. After these successes, he decided to pursue the perfect synthetic insecticide. He absorbed all the information possible on the subject, came up with properties such an insecticide would exhibit, and set forth on his solitary quest to find it. After four years of work and 349 failures, in September of 1939, Müller placed a compound in his fly cage. After a short while the flies dropped and died. What he had found was DDT.

In 1948, Paul Müller was awarded the Nobel Prize in Medicine, despite the fact that he was neither a doctor nor a medical researcher, but rather a chemist. Such recognition speaks volumes about the world's perception of the benefits of DDT in preventing human disease. Later, due to overuse, questions began to surface about its impact on nature. Then environmentalists rallied against it, which culminated in the U.S. Environment Protection Agency banning DDT in 1972. Soon, most other countries also banned its use. Environmentalists and public health advocates remained polarized for decades over DDT. It wasn't until September, 2006, that the World Health Organization reversed its stance and admitted DDT was at times the best insecticide to prevent malaria. As the years have passed, many on both sides of the debate are coming to realize proper limited use of DDT, on the inside walls of homes, can be effective and have virtually no impact on the environment.

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