

How DDT Harmed Hawks and Eagles (excerpt)

Pesticide DDT is a chemical compound that was a major factor in reducing the eagle and hawk populations around the world. Raptors were also hurt by other problems such as hunting and deforestation. The 1972 ban of DDT certainly contributed to the birds of prey's revival in the United States. It is important to understand how people have tracked and identified their progress. The modern day explosion of nesting pairs makes us realize the disastrous effects of synthetic pesticides.

The United States used DDT during the mid-1900s. During and after World War II (1939–1945), DDT was widely used as a synthetic pesticide to prevent insects from killing agricultural crops. It was popular with farmers, foresters, and domestic gardeners. The compound reached a global peak of 386 million pounds (175 million kilograms) in 1970. In 1959, the United States sprayed 79 million pounds (36 million kilograms) of DDT chemical compound.

The dangerous consequences of spraying synthetic pesticides were not realized until 1962. An American biologist, Rachel Carson, published *Silent Spring*. The public learned DDT caused cancer in people. The synthetic pesticide harmed eagles and other birds of prey populations. Bald eagles were threatened with extinction in the lower 48 states. Finally, in June 1972, the U.S. Environmental Protection Agency (EPA) banned DDT use in the United States. Recently as May 23, 2001, DDT pesticide use was limited worldwide at the Stockholm Convention.

Birds of prey species badly affected by synthetic pesticide use included: peregrine falcons, sharp-shinned hawks, Cooper's hawks, Eurasian sparrow hawks, osprey, bald eagles, white-tailed eagles, brown pelicans, and herons.

The eagle needs rich soil and its fertility. Grass cannot grow on deteriorated soil. A diminishing rabbit population hurts eagle populations. DDT contaminated many soils and plants. Mice stored the poisonous particles in their fatty tissues. Hawks consumed numerous mice, and their numbers declined because of DDT poisoning.

Bald eagle populations decreased as low as 500 nesting pairs in the lower 48 states. Some bald eagles were poisoned because their fish ingested synthetic pesticides. The 1972 DDT ban and the 1973 Endangered Species Act, helped reverse a dismal trend. The lower 48 states noticed an increase of over 5,000 nesting pairs. 70,000 bald eagles inhabit North America.

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In 2007, the American bald eagle was taken off the endangered species list in Wisconsin. In 1973, the bald eagle inhabited 108 territories in the state. Those territories rose to 1,150 breeding pairs in 2010. Half of the eagle population nest on privately owned land. It makes it important for Wisconsin citizens to understand the importance of protecting eagles.

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Date: July 26, 2007

Source: <http://www.helium.com/items/2203587-how-ddt-harmed-hawks-and-eagles>

Publisher: www.helium.com

A New Home for DDT (excerpt)

By Donald Roberts
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DDT, the miracle insecticide turned environmental bogeyman, is once again playing an important role in public health. In the malaria-plagued regions of Africa, where mosquitoes are becoming resistant to other chemicals, DDT is now being used as an indoor repellent. Research that I and my colleagues recently conducted shows that DDT is the most effective pesticide for spraying on walls, because it can keep mosquitoes from even entering the room.

The news may seem surprising, as some mosquitoes worldwide are already resistant to DDT. But we've learned that even mosquitoes that have developed an immunity to being directly poisoned by DDT are still repelled by it.

Malaria accounts for nearly 90 percent of all deaths from vector-borne disease globally. And it is surging in Africa, surpassing AIDS as the biggest killer of African children under age 5.

From the 1940s onward, DDT was used to kill agricultural pests and disease-carrying insects because it was cheap and lasted longer than other insecticides. DDT helped much of the developed world, including the United States and Europe, eradicate malaria. Then in the 1970s, after the publication of Rachel Carson's *Silent Spring*, which raised concern over DDT's effects on wildlife and people, the chemical was banned in

many countries. Birds, especially, were said to be vulnerable, and the chemical was blamed for reduced populations of bald eagles, falcons, and pelicans. Scientific scrutiny has failed to find conclusive evidence that DDT causes cancer or other health problems in humans.

Today, indoor DDT spraying to control malaria in Africa is supported by the World Health Organization; the Global Fund to Fight AIDS, Tuberculosis and Malaria; and the United States Agency for International Development.

It would be a mistake to think we could rely on DDT alone to fight mosquitoes in Africa. Fortunately, research aimed at developing new and better insecticides continues—thanks especially to the work of the international Innovative Vector Control Consortium. Until a suitable alternative is found, however, DDT remains the cheapest and most effective long-term malaria fighter we have.

A New Home for DDT (excerpt)

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Source: Opinion Editorial, The New York Times.

http://www.nytimes.com/2007/08/20/opinion/20roberts.html?_r=0.

Published: The New York Times, August 20, 2007.