



Sympathy for the Mosquito?

Anti-Spraying Hysteria Reaches the Absurd

by Angela Logomasini

“Save Our Mosquitoes” isn’t a plea one expects to hear these days, with the mosquito-borne West Nile Virus killing hundreds and making thousands of people sick. But just two summers ago, someone posted that very appeal on a sign in Chargin Falls, Ohio. These “poor bugs” were indeed at risk as the town debated whether to spray pesticides that year. Residents, feeling unduly merciful, gave the mosquitoes a stay of execution: No spraying in 2002.

Discovered by an official from the local health department, the sign shows how bizarre the debate about mosquito spraying has become. While it makes good sense for every community to consider all the facts about spraying, few of these debates have focused on any rational discussion—instead falling prey to misinformation campaigns and hysteria.

Radical environmental groups bear much of the blame for feeding the hysteria by making a host of unsupported claims about the risks associated with pesticides. In contrast to its sympathy for the mosquito’s “plight,” the anti-pesticide crowd has shown little concern for humans suffering from the often debilitating—and sometimes deadly—virus transmitted by the bugs. In the past, these groups have downplayed the risks of West Nile by claiming that the illness only kills the elderly, the sick, and children—as if that offered any comfort! (Yet that claim isn’t even true. In 2003, the median age of those who died from the virus was 47 years, within an age range of one month to 99 years.)

The radical environmentalist anti-spraying stance may have played better before 2002, when the death toll remained relatively low. Starting in 2002, West Nile took a disturbing turn. The Centers for Disease Control and



CDC/James Gathany

Prevention (CDC) reported that more than 4,000 people became ill and 300 died—compared to about 150 cases and 18 deaths over the previous three years. In 2003, the CDC’s tally is nearly 10,000 cases and more than 250 deaths. Almost 3,000 of these cases were reported to be West Nile meningitis or encephalitis, which is a particularly painful and potentially debilitating form of the disease.

Clearly, West Nile is a very serious and growing problem, so spraying must be pretty dangerous to arouse so much concern, right? Wrong. Consider the CDC data on documented cases of health problems related to pesticide exposures from spraying during the period 1999-2002. If spraying-related health problems were as rampant as environmental activists suggest, we should expect some significant documentation of cases. But the CDC data indicate that the number of cases has been very small and the impact only temporary.

According to the CDC report, there were two cases of definite health impacts, 25 probable cases, and 106 possible cases. No deaths were reported. That’s a total of 133 potential cases of temporary illness over four years—none of them fatal—among a population that CDC estimates was 118 million in 2000. CDC concluded: “The findings in this report indicate that serious adverse outcomes potentially related to public health insecticide application were uncommon. When administered properly, in a mosquito-control program, insecticides pose a low risk for acute, temporary health effects.”

In four years of spraying, there has been only one case that could be considered severe, and that case was related to asthma and chronic obstructive pulmonary disease (COPD). CDC explained the circumstances thus: “When her neighborhood was sprayed, a woman aged 54 years was exposed to sumithrin, which passed through operating window fans



and a window air conditioner. She had exacerbation of her asthma and chronic obstructive pulmonary disease." Window fans suck in air from the outdoors, which is something that a COPD patient should avoid. Individuals with COPD generally have to be very careful because even minute amounts of substances can initiate respiratory complications. Dust, pollen, and even air fresheners can trigger such episodes.

Fortunately, this individual recovered. Her case highlights special precautions that COPD patients must take to reduce exposure to a host of substances, both natural and man-made, but it does not justify inadequate protection of the public from vector-related risks. In fact, COPD patients would be particularly vulnerable should they be struck with

able public health benefits. The authors, Mark S. Fradin of the University of North Carolina and John F. Day of the University of Florida, note: "DEET-based products provided complete protection for the longest duration. Higher concentrations of DEET provided longer-lasting protection." DEET lasted for 301.5 minutes, while the next best alternative lasted not even one third as long (94.6 minutes). For these reasons, the *Journal* study dubbed DEET the "gold standard" for protection against insect-borne illnesses.

Activists have also spread misinformation about the impact that spraying has on wildlife. The Audubon Society has repeatedly claimed that data collected by the State of New York prove definitively that pesticides, primarily lawn products,

includes two entries on pesticides. One concludes that animal deaths related to organophosphate pesticides "are usually sporadic and infrequent in occurrence." The other notes: "Mortality in wildlife due to chlorinated hydrocarbon poisoning is seldom observed in Michigan anymore." In addition, the U.S. Environmental Protection Agency—which studies these products extensively—maintains that spraying has negligible impact on birds.

While claims about rampant pesticide deaths are not supported, the impact of the West Nile virus is well recognized and documented as a serious threat to wildlife. Emi Saito of the USGS calls West Nile Virus "a huge concern." She told *USA Today*: "If it's attacking our endangered species, is it going to lead

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West Nile, which could easily kill someone with a compromised respiratory system.

Environmental activists have also claimed that application of chemical insect repellants—particularly those containing DEET—can increase risks of seizures among children. But in a recent review of the literature on this topic published in the *Canadian Medical Association Journal*, researchers from the Universities of Toronto, Western Ontario, and Montreal report that none of these studies were conclusive that DEET was in fact the cause of seizures. Given that 3 to 5 percent of children suffer from such seizures for a variety of reasons and that 23 to 29 percent of children are exposed to DEET, it is possible that the cases were incorrectly attributed to DEET.

Similarly, a *New England Journal of Medicine*-published study of the relative effectiveness of various repellants found DEET to pose minimal public health risks, while providing consider-

are killing the majority of birds, far more than those killed by West Nile or other diseases. Yet New York State has not publicly released any data on this topic in any report, nor has such data been peer reviewed. Further, the researcher who conducted these tests has not publicly made the pesticide claim either, and has even told the press that spraying isn't a significant risk to birds.

Reports by other governmental bodies do not support Audubon's claims, either. The U.S. Geological Survey (USGS), a division of the Department of Interior, has been collecting data and studying wildlife diseases for decades. USGS researchers study pesticide-related deaths among wildlife, focusing on pesticides only when an illegal use or over-application is reported. It shows that many mass die-offs of species occur from natural causes. Far fewer incidents are related to illegal and/or excessive use of pesticides. The State of Michigan also has collected data on wildlife-related illnesses. Its *Wildlife Disease Manual*

to their extinction?" Because of such concerns, the USGS, U.S. Department of Agriculture, and CDC have stepped up efforts to study West Nile's impact on birds. USGS reports that West Nile has killed birds from at least 160 bird species, including some endangered species.

This year, West Nile is expected to spread throughout the West Coast, and debates and misinformation about spraying will likely spread along with it—exacerbating the virus' spread. But it doesn't have to be. Hopefully sympathy for the humans will prevail over the "plight" of the mosquito.

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