

PRIMER ON CLIMATE CHANGE

by Tom Kuennen

New Research Puts Chill On Disease Outbreak Fear

Will presumed global warming cause malaria and other so-called "tropical" diseases to migrate to areas where they're not known?

People who believe in global warming place the spread of diseases like malaria among the supposed disasters -- like rising sea levels and catastrophic storms -- that climate change is supposed to trigger. Part of this alarm is fed by reports of malaria in areas where it recently was uncommon, like Toronto, Detroit and certain republics of the former Soviet Union.

"Some scientists fear the effects [of global warming] will be disastrous in numerous ways," reported Dan Vergano in *USA Today* in January 2000. "Tropical diseases, such as dengue fever and malaria, might move north into vulnerable populations."

But a new article published by a journal of the federally funded U.S. Centers for Disease Control and Prevention (CDCP) points out that malaria was most frequent in England and Europe during the well-documented "Little Ice Age" of the 16th and 17th centuries, and already was endemic throughout North America and elsewhere. The article puts ice on the idea that presumed global warming will lead to catastrophic spread of infectious disease.

In *From Shakespeare to Defoe: Malaria in England in the Little Ice Age*, CDCP disease entomologist Dr. Paul Reiter proves that spread of so-called "tropical" infectious diseases is a function of depressed public health, not warmer average temperatures.

Claims that malaria's reappearance is due to climate change ignore reality and disregard history, Reiter said. "For example, the many statements that recent climate change has caused malaria to ascend to new altitudes are contradicted by records of its distribution in 1880 to 1945," he said. "Public concern should focus on ways to deal with the realities of malaria transmission, rather than on the weather."

A few years ago -- in the British medical journal *The Lancet* -- Reiter demonstrated that poor public health infrastructure was to blame for a 1995 outbreak of dengue fever, in which only seven cases were reported in the entire state of Texas, while over 2,000 cases were reported in one border town alone, Reynosa, Mexico.

What's new about the England study is Reiter's affirmation that malaria was rampant in cooler countries during the coldest period of recorded history -- the Little Ice Age -- when glaciers were extended, winters were fiercer and prolonged, crops failed, and average weather conditions changed dramatically throughout the globe.

Evidence for the Little Ice Age is extensive and broad-based. "The winter 1564-65 was long and bitterly cold and was the first of many that brought great hardship and strife throughout Europe," Reiter said. "Present global temperatures are in a warming phase that began 200 to 300 years ago."

Until the second half of the 20th century, malaria was endemic and widespread in many temperate regions, with major epidemics as far north as the Arctic Circle, he reported. "From 1564 to the 1730s -- the coldest period of the Little Ice Age -- malaria [ague] was an important cause of illness and death in several parts of England," he said.

Malaria began to decline only in the 1800s, during a prolonged period of average warming which continues today. Reiter linked its decline to improved farming techniques which drained mosquito breeding areas; the movement of people from rural to urban areas, brought by the Industrial Revolution; better habitation and improved public sanitation; and the earlier introduction of the new drug quinine from South America.

The introduction of quinine took place "when temperatures were probably colder than in any other period in the past 10,000 years," Reiter said. "Records for central England from 1670 to 1700 suggest that snow lay on the ground for an average of 20 to 30 days (in some years more than 100 days) as opposed to two to 10 days in the present century."

One reason that malaria is being reported in "new" areas is the exponential rise in international travel. "Tens of thousands of cases are imported into Europe and North America each year," Reiter wrote.

Declining public health standards in areas suffering political or economic turmoil -- like parts of Asia and Africa -- are spreading malaria there. "Malaria is increasing rapidly in southern Africa, killing far more people than AIDS," wrote Lorraine Mooney, a medical demographer for the European Science and Environment Forum, in *The Wall Street Journal* recently. "Rates in South Africa are up an astonishing 500 percent in recent years." She said efforts by environmentalists to make poor nations stop using DDT is causing malaria to spread in those countries.

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