



**Which  
of These  
Animals  
Is the  
Deadliest  
on Earth?**



**TURN  
THE PAGE  
TO FIND OUT!**



**Synthesizing** As you read these articles and the “Malaria Milestones” sidebar, look for how malaria has affected people throughout time.

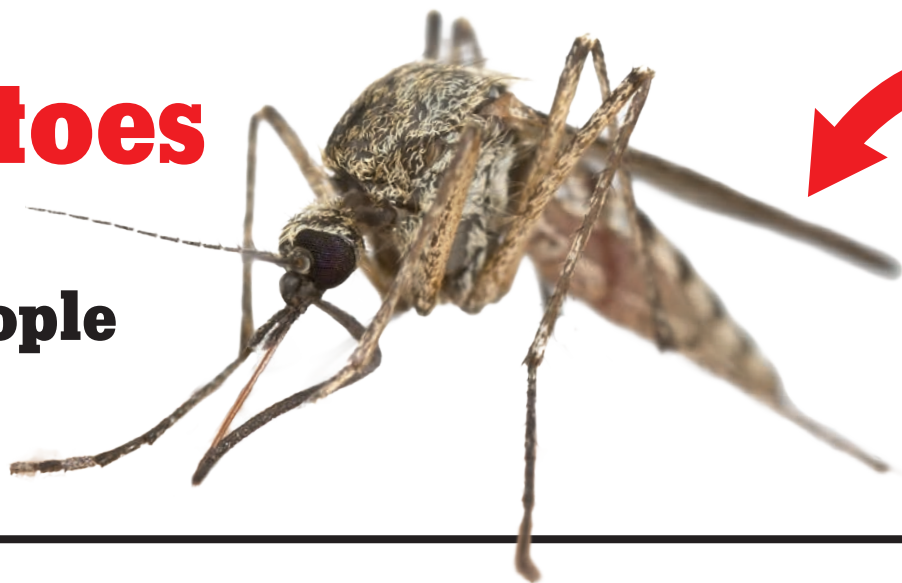
LOOK FOR WORD NERD’S 7 WORDS IN BOLD



# Mosquitoes

## kill nearly 750,000 people every year

BY LAUREN TARSHIS



**Ancient Bugs**  
Mosquitoes have been tormenting Earth’s creatures for 100 million years.

But the most dangerous animal in Africa—and in many countries around the world—does not have crushing teeth or ripping claws or fangs dripping with poison. In fact, you could kill one with a flick of your finger.

It’s the mosquito.

For most of us in the United States, mosquitoes merely cause itchy bumps and ugly scabs.

But in more than 100 countries, mostly in Africa and Asia, mosquitoes are a leading cause of death. Each year, these tiny insects kill almost 750,000 people. That’s more than are killed by the rest of Earth’s deadliest creatures combined.

Mosquitoes kill by spreading diseases, mainly a disease called malaria (muh-LAIR-ee-uh).

### An Ancient Problem

For as long as humans have been walking the Earth, mosquitoes have been buzzing in their ears. Mosquitoes bit the jeweled necks of ancient Egyptian kings and the muscled arms of medieval warriors. They **tormented**

Navajo chiefs and Chinese empresses, and George Washington’s troops as they camped at Yorktown.

Malaria, too, is an age-old **menace**. In fact, it has been sickening humans and their **ancestors** for at least 500,000 years. It was the Italians that gave the disease its name many hundreds of years ago. The word *malaria* comes from two Italian words: *mala* (which means “bad”) and *aria* (which means “air”).

As the name shows, early thinkers believed that the disease was caused by moist, stinky air. It was a logical guess, since most people who got sick lived near rivers, lakes, or other humid areas where mosquitoes **thrive**.

It wasn’t until the late 1800s that scientists understood that it wasn’t the air making people sick. It was mosquitoes.

### “Blood Feed”

Over the decades, researchers have learned more and more about malaria, including how it is spread. They know that out of 3,500 species of mosquitoes, only the species belonging to one group—*Anopheles*—carry the disease. It is the female *Anopheles* that can make humans sick. (Interesting fact: Male mosquitoes do not feed on human blood.)

**I**n the wilds of eastern Africa live many creatures that will fill your heart with fear. There are 4-ton hippos that can chomp a person in half. There are lions that can hear your footsteps from a mile away. And the snakes—so many snakes! Cobras and puff adders and mambas with venom that can kill a 200-pound man in minutes.

SHUTTERSTOCK (MOSQUITO, INSECTS); DEA PICTURE LIBRARY/GETTY IMAGES (MUMMY); ISTOCKPHOTO/GETTY IMAGES (KING TUT)

JOHN PARR/ISTOCKPHOTO IMAGES/GETTY IMAGES (SOLDIER); SHUTTERSTOCK (LITTLE FLY); GREGORY G. DIMJIAN, M.D./SCIENCE SOURCE (CURE); SHUTTERSTOCK (INSECTS)

# Malaria Milestones

For tens of thousands of years, humans have been battling malaria

### Malaria Mummies

Scientists have detected traces of malaria in 3,500-year-old mummies, including that of King Tut.



### Sick Soldiers

During World War II, between 1941 and 1945, U.S. soldiers fought on Pacific islands and in African countries swarming with mosquitoes.

Roughly 60,000 of these soldiers died of malaria.

**Mosquito means “little fly” in Spanish.**



### Ancient Cure

About 1,600 years ago, Chinese healers used the sweet wormwood plant to treat people with malaria.

In the 1990s, this plant was used to make the most effective malaria medicine, artemisinin [ar-tuh-MISS-uh-nihn].

But many sick people don’t get the drug in time to save their lives.

# How America Beat Malaria

BY LAUREN TARSHIS

**M**alaria hasn't always been a disease that sickens people only in far-off countries. Until recently, it was a leading killer here in the United States. George Washington suffered from malaria. Abraham Lincoln survived the disease. So did Civil War general Ulysses S. Grant.

By the early 1900s, malaria was sickening millions of Americans every year and killing thousands. The problem was most severe in the southern states, since mosquitoes thrive in warm, wet areas.

## War on Mosquitoes

In 1947, the U.S. government declared war on the mosquitoes that spread malaria. The main weapon was a powerful insecticide called DDT, which instantly kills mosquitoes. More than 4 million homes in the



An airplane sprays DDT in Savannah, Georgia, in an antimalarial effort.

South were sprayed with DDT. Airplanes dumped it into swamps and other wet areas.

DDT worked so well that by 1949, malaria was no longer a major health problem in the U.S. Today, if someone in the U.S. has malaria, he or she almost certainly got it while visiting another country.

## DDT Dangers

But there is a dark side

to this success story. In the 1960s, scientists discovered that DDT doesn't kill just mosquitoes, but birds and other insects too. It can also cause serious health problems in humans. DDT has been banned in the U.S. and most other countries since the 1970s.

And so the search for new weapons against malaria continues. ■

Malaria is spread when a person already infected with malaria is bitten by a female mosquito. During its “blood feed,” the mosquito gorges itself with the blood of the sick person. It then flies away. Days later, when the mosquito is ready for its next meal, it lands on a new person. As the mosquito jabs that person's flesh, malaria germs known as *Plasmodium* enter the new victim's blood.

Every minute . . . one African child dies of malaria.



## Some Progress

In this way, bite by itchy bite, 214 million people are infected with malaria each year. Those who become sick get high fevers, bone-rattling chills, and muscle aches so painful that victims often scream in agony. Many recover. But malaria kills roughly 440,000 people every year. The majority are children under the age of 5. More than 90 percent of these deadly cases happen in Africa.

Over the past decade, progress has been made in preventing and treating malaria.

But malaria is a complex disease. As of now, there is no “magic bullet”—a cure or vaccine that works for everyone. Most cases today happen in some of the world's poorest countries, where medical care is often lacking. Many victims live in crowded areas where mosquitoes can easily spread malaria from person to person.

Today, scientists are scrambling to find better ways to stop this killer disease. Until they do, the tiny mosquito will be the most fearsome animal on the planet. ■

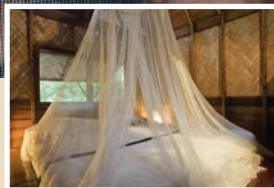
## A Promising Shot

For decades, scientists have been working to create a vaccine that would protect people from malaria. But as of now, there is no effective malaria vaccine.



## Safer Sleepers

Bed nets coated with mosquito-killing chemicals can help prevent people from getting malaria. Over the past 10 years, millions of bed nets have been distributed in countries in Africa and elsewhere.



MSHEP2/GETTY IMAGES (MALARIA KILLS); HOLLY WILMETH/GETTY IMAGES (GIRL IN NET); SHUTTERSTOCK (BED NET); ISTOCKPHOTO.COM/GETTY IMAGES (SHOT); SHUTTERSTOCK (INSECTS)

USDCDP/WWW.PUBLIC-DOMAIN-IMAGE.COM

## WHAT'S THE CONNECTION?

Use information from the main article, the informational text, and the “Malaria Milestones” sidebar to create a timeline showing how malaria has affected people through the ages, from 500,000 years ago until today.

FIND AN  
ACTIVITY  
ONLINE!