

Death on Tiny Wings

Mosquito-borne yellow fever terrorized Texas multiple times in the 1800s

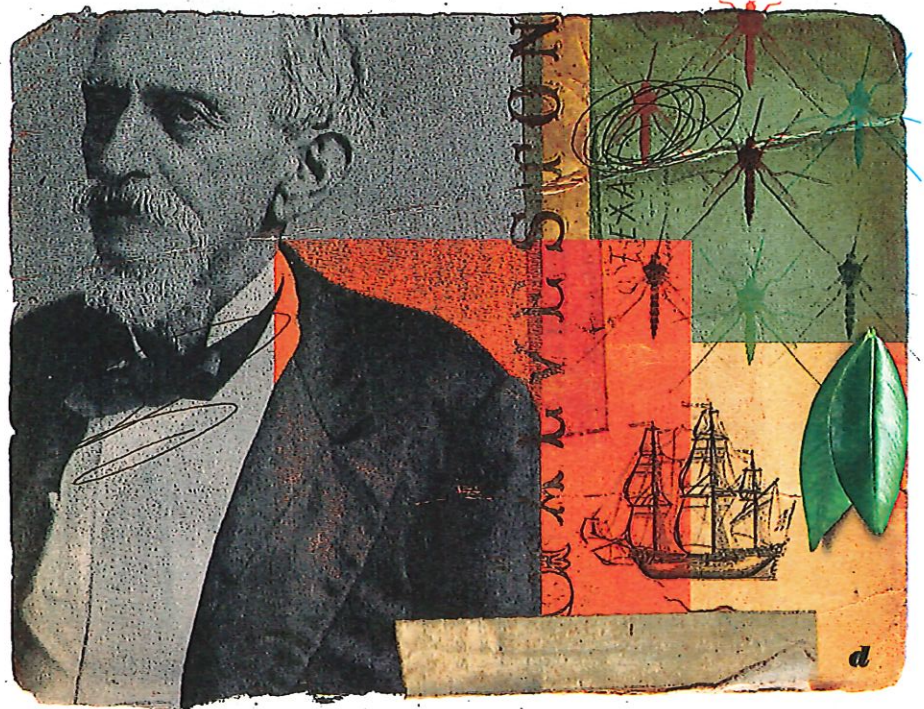
BY MARTHA DEERINGER

IT BEGAN WITH A HEADACHE, FOLLOWED by chills, fever, muscle and bone pain, and dizziness. “After a few hours, the eyes are bloodshot, and have a peculiar shining, drunken appearance,” wrote Dr. Ashbel Smith, who treated patients on Galveston Island during the yellow fever epidemic of 1839. “A diminution of the pains and febrile excitement very generally takes place, from eight or 10 to 20 hours.”

At this point, the patient either began to recover or progressed to the critical stage. The yellow tinge of jaundice that gave the disease its name appeared, followed by the dreaded “black vomit,” which signaled the approach of death.

From 1668 to 1893, port cities along the Gulf of Mexico, Atlantic Ocean and Mississippi River basin were stricken by 135 major yellow fever epidemics, according to a 1986 article in *Texas Medicine*. At least nine times between 1839 and 1867, Galveston suffered outbreaks that killed a total of 6,000–8,000.

Yellow fever, also called yellow death or yellow jack (after the yellow flags ships were required to fly when passengers showed signs of illness), terrified early Texans. Once stricken, a healthy person could be dead within three days, and doctors were at a loss to explain the fever’s rapid spread. Smith was correct to believe that it was not contagious. But he and other physicians wrongly believed garbage heaps and unsanitary conditions produced particles called miasmata that infected



those who breathed the contaminants. That theory was questioned during the epidemic of 1853, as increased sanitation and quarantines did not stop the disease and 60% of Galvestonians got sick.

The virus that causes yellow fever likely originated in Africa and was transmitted to the Americas by slave ships as early as the 1600s. Major outbreaks occur in populated areas where breeding mosquitoes transmit the virus from person to person. Frightened residents of Galveston and other cities hit by large outbreaks burned barrels of tar in the streets and sprayed sulfur and lime in the homes of infected patients—believing the substances served as disinfectants. Even so, the agony subsided only after a hard freeze, often resurfacing when spring arrived.

During the 1839 epidemic, a cabin just east of 18th Street in Galveston, built on raised blocks with two windows and a door in the middle, served as the general hospital. It was erected away from town to isolate the sick. Shallow burials nearby revealed bones exposed by the sea washing over them.

A Cherokee woman named Sarah Ridge Paschal successfully treated yellow fever patients in her home with traditional Cherokee herbal medicine, including tea from orange tree leaves. All of her patients survived, and neither she nor any of her three children caught the fever.

Texas doctors were unable to recognize the mosquito vector. Pathologist Walter Reed, experimenting on humans in Cuba in 1900, confirmed Carlos Finlay’s hypothesis of 1881 that mosquitoes transmitted the disease. The experiments proved that mosquitoes flourished in fresh water and transmitted the disease after a viral incubation period of at least 12 days. This essential information spread, and mosquito control improved.

Smith went on to become the driving force behind the establishment of the University of Texas at Austin and the University of Texas Medical Branch in Galveston. Today, yellow fever can be prevented by a single dose of vaccine.

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