

SCIENCE & TECHNOLOGY

*Yellow Fever's
Comeback*

"The Ghost of Yellow Jack" by Jonathan Leonard, in *Harvard Magazine* (Mar.-Apr. 1981), 7 Ware St., Cambridge, Mass. 02138.

The disease killed 4,000 Philadelphians in 1793, and it so decimated Memphis, Tenn., that the city lost its charter in 1878. Last seen on an epidemic scale in this country in 1905 (in New Orleans), yellow fever appears to be making a comeback after nearly two decades in abeyance in the Western Hemisphere. So reports Leonard, a free-lance writer.

The yellow fever virus, which attacks the liver and kidneys, was transmitted in American cities by an urban mosquito called *Aedes aegypti*. The *aegypti*, writes Leonard, is a "human camp follower"—like the cockroach. Its larvae die in moving water, and other mosquitoes' larvae eat them in swamps and ponds. But in the stagnant water of roof gutters, flower vases, and old beer cans, they thrive.

In 1947, the member states of the Pan American Health Organization launched a massive attack on *aegypti*, which cleared most of South and Central America of the mosquito by 1960. But, relying on vaccination and the availability of DDT pesticide, U.S. health officials never launched a serious campaign to clean up *aegypti's* choice breeding spots. Protests from Mexico finally sparked a belated program in 1962; but house checks met strong citizen resistance, and many breeding sites remained when the effort was dropped in 1969.

The U.S. failure to wipe out *aegypti* takes on threatening dimensions because the yellow fever virus continues to flourish in impregnable jungle refuges, living in a cycle traveling between monkey and jungle mosquito. In 1978 alone, 200 people contracted jungle yellow fever in Latin America. If one of them had arrived in a Southern U.S. city and been bitten by an *aegypti*, a yellow fever epidemic could have started here.

Urban yellow fever has not yet reappeared in Latin America, but jungle yellow fever cases are on the rise. Moreover, dengue (or "breakbone fever"), also borne by *aegypti*, has been spreading rapidly through Latin America, with 2.5 million cases reported in the Caribbean in 1977. In 1980, a Brownsville, Texas, woman contracted the first U.S. case (not imported by a tourist) since 1945. Yellow fever, Leonard suggests, may not be far behind.

Academic Overruns

"Indirect Costs of Federally-Supported Research" by Kenneth S. Brown, in *Science* (Apr. 24, 1981), 1515 Massachusetts Ave. N.W., Washington, D.C. 20005.

In 1979, the U.S. National Institutes of Health (NIH) awarded \$1.58 billion in research grants to universities. But nearly 27 percent of that sum (\$422 million) never reached the laboratory. It was collected to recoup "indirect costs," or overhead, by academic administrators.

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