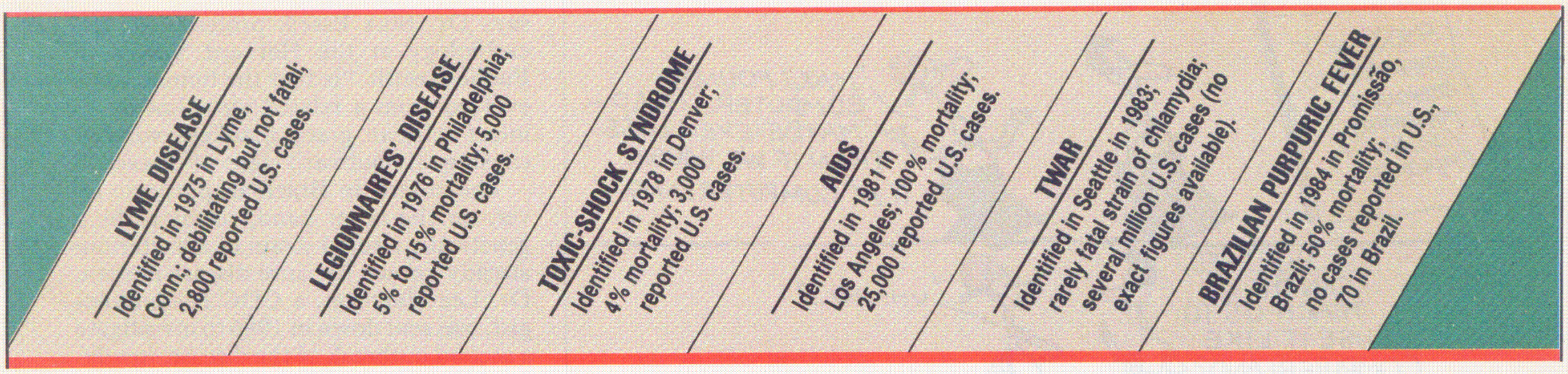

How new are today's new diseases?

Toxic-shock syndrome posed as scarlet fever. Legionnaires' was confused with viral pneumonia. But some ills are true originals

■ In 1984, 10 children in a small Brazilian town developed huge purple blotches on their skin along with high fevers. They were taken to a nearby emergency ward, but the medical staff was baffled. All 10 children died before doctors could figure out how to treat them.

The mystery disease, dubbed Brazilian purpuric fever by investigators from the U.S. Centers for Disease Control in Atlanta, is only the latest in a series of ailments that have come to light over the last decade. Toxic-shock syndrome, Legionnaires' disease, acquired-immune-deficiency syndrome—these illnesses and others suddenly emerged from obscurity, some becoming household names. Are there truly new diseases in this modern age? Or are medical sleuths simply becoming more adept at tracking down and naming old ones?

The answer to both questions is "Yes." According to Dr. Claire Broome, director of CDC's Special Pathogens Branch, most "new" diseases have, in fact, been around a long time—but went undiagnosed until modern laboratory methods made it possible to identify them. Only Brazilian purpuric fever and AIDS seem wholly new, arising from mutations in less harmful microbes.

Wrong diagnosis

After CDC officials isolated the bacterium that killed 29 people at a 1976 American Legion convention in Philadelphia, for example, they found samples of the germ stored in their vaults. The samples came from people presumed to have died from pneumonia. "In the past," says Dr. Broome, "probably most cases of Legionnaires' were mistaken for viral pneumonia."

Toxic-shock syndrome was another case of mistaken identity. The public didn't know about the ailment until 1980, when a jump in the number of people afflicted by it was linked to Rely tampons. But a CDC epidemiologist, Dr. Benjamin Schwartz, believes it had long been around—misdiagnosed as scarlet fever, which produces similar symptoms. When the tampons were taken off the market, the number of reported cases of toxic-shock syndrome dropped rapidly, but 158 cases were reported in 1985—evidence of the persistence of the disease and the fact that tampons weren't solely at fault.

Modern medical practices and technology sometimes give diseases a foothold. The rampant use of antibiotics, according to Schwartz, is breeding drug-resistant microorganisms—especially in hospitals. And intravenous lines give bacteria an open door into sick patients' blood. *Staphylococcus epidermidis* is a notorious example. Long considered harmless, the bacterium is now a leading cause of infection in intensive-care units. Tough new strains that don't respond to antibiotics routinely find their way into patients' veins through intravenous tubes and even get into artificial-heart valves. "It's a terrible problem," says Broome, "and can be fatal for patients who are very ill to begin with."

The public imagination often inflates the significance of newly identified diseases because they seem to spring forth, full-blown and alarming, from nowhere. In reality, doctors simply diagnose symptoms more accurately once a disease is recognized. The number of reported cases of Lyme disease, a tick-transmitted infection that causes chronic arthritis, heart disease and neurological disorders, has multiplied by six since it appeared in Connecticut in 1975. Yet many health officials say better reporting accounts for a substantial part of the increase. The Connecticut chapter of the Arthritis Foundation helped focus attention by distributing 55,000 pamphlets on the disease. "We got so many calls that we set up a hot line with a tape-recorded message," says Richard Falco, medical entomologist for the Westchester County, N.Y., health department. "We've worn out our third tape." Children in the Northeast now wear long-sleeved shirts and pants tucked into socks when they go to summer camp.

PATTI MURRAY—ANIMALS ANIMALS

African green monkey: Origin of AIDS?

JOHN CHELLMAN—ANIMALS ANIMALS

Parrot fever may have turned into TWAR

Tracking down an unknown disease is detective work of the highest order, with plenty of clues but few concrete answers. Dr. Thomas Grayston, professor of epidemiology at the University of Washington in Seattle, has discovered a new strain of the chlamydia microorganism, called TWAR, that accounts for 13 percent to 21 percent of all diagnosed cases of pneumonia among college students. Unlike a more common chlamydia strain on campuses, TWAR isn't passed along sexually. Just how people get it is a mystery. "All we know for certain," says Grayston, "is that the pneumonia-causing strain more closely resembles a type of chlamydia that causes fever and is commonly gotten from direct contact with parrots and other animals."

AIDS, for that matter, may have animal origins. "One popular theory,"