Fake Cows Fight Disease

Fake cows may be art on some continents, but in Africa they save bovine lives. Artificial cows that attract and kill flies have produced a dramatic decline in insect-borne cattle disease in Zimbabwe over the past 17 years, according to new findings.

Tsetse flies were once an insidious pest in Zimbabwe, spreading pathogens responsible for deadly sleeping sickness in man and a similar disease called nagana in cattle, diminishing milk yields and wiping out herds. That was until 1984, when an international team of researchers began deploying cow-sized rectangles of blue and black cloth that are irresistible to tsetse flies and impregnated with fatal insecticide.

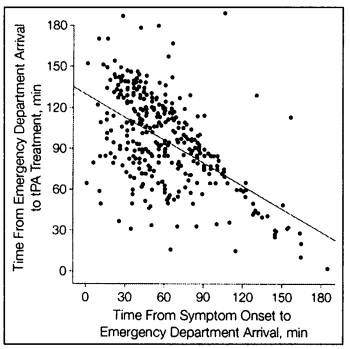
A deadly "cow."

More than 60,000 cloth cows now dot the nation's ranches, and "infection rates have plummeted," says entomologist Steve Torr of the University of Greenwich, U.K. Drawing on monitoring data from several hundred inspection centers, Torr found that nagana infections have dropped from 10,000 to just 50 per year, according to an analysis to be published later this year.

Ian Maudlin, director of the Centre for Tropical Veterinary Medicine at the University of Edinburgh, U.K., says the decoys are deceptively simple but—as far as flies are concerned—capture the essential "attractiveness of a real cow."

Exorcising Extrapolation

Your experiment resulted in a cloud of data points. What to do? Plot them on a graph and calculate the best fitting line, of course. But statisticians agree that the line shouldn't extend beyond the range of known points without signaling to the reader that it has entered hypothetical territory—by switching to a dotted line, for instance. However, such signposts go missing all the time in four leading medical journals, says Yen-Hong Kuo, a biostatistician at the Jersey Shore Medical Center in Neptune, New Jersey.

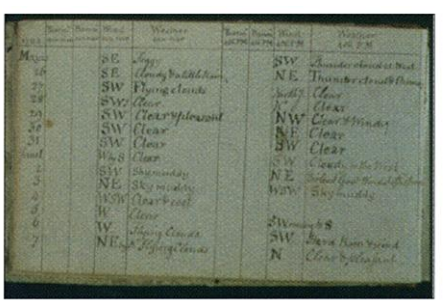


Kuo scoured every issue of *The Journal of the American Medical Association* (*JAMA*), *The New England Journal of Medicine*, *The Lancet*, and the *British Medical Journal* published in the first half of 2000 looking for scatter plots with lines drawn through them. Of 37 such plots, almost 60% failed to indicate when the line ran beyond actual data points, Kuo reported last month at a meeting in Barcelona, Spain. In four cases, the lines extended so far that the graphs made no sense. One *JAMA* paper, for instance, suggested that patients arrived at emergency rooms before the onset of stroke symptoms (see graph), while a study published in *The Lancet* had patients secreting a negative amount of proteins in their urine.

Such gaffes may be statistical misdemeanors, says Kuo, but they can be confusing, or even dangerous if they lead doctors to choose the wrong treatment. And medical journal editors at the meeting acknowledged that they should do a better job. But bad best fit lines seem impossible to erase, says Barbara Hawkins, an epidemiologist specializing in ophthalmology at Johns Hopkins University. "It's one of my pet peeves," says Hawkins. "I always point it out when I review a paper, but it doesn't always get fixed."

Society Holds First Exhibit Since 1811

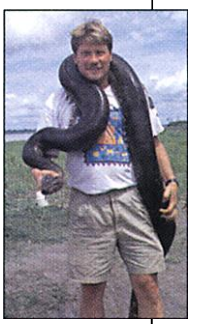
When the American Philosophical Society closed its last public exhibit in 1811, James Madison was president of the United States. Now Madison's meteorological diary is a centerpiece of the first exhibit at the Philadelphia, Pennsylvania, society since 1811, which focuses on early American scientific instruments. In addition to the diary, objects include a barometer made from a banjo and surveying instruments used to draw the Mason-Dixon Line. "From the Laboratory to the Parlor: Scientific Instruments in Philadelphia, 1750–1875" will be on view until March 2003.



James Madison's meteorological diary is part of a new exhibit.

Venomous Bite Kills Snake Researcher

A field expedition to remote Burma (Myanmar) ended in tragedy last month, with the death of a prominent expert on venomous snakes from snakebite. Bad weather frustrated attempts to rescue Joseph Slowinski, 38, from a field site deep in north Burma, 8 hours from a radio.



Slowinski

Slowinski received the deadly bite when—trying to identify a snake that had bitten another expedition member—he reached into a bag containing the deadly snake, a krait called *Bungarus multicinctus*, according to Amy Cramer of the California Academy of Sciences (CAS). Slowinski, a curator there since 1997, died 30 hours later, before rescue helicopters reached the site.

Slowinski specialized in the evolutionary relationships of neurotoxic snakes. He had made more than 10 snake-surveying trips to Burma and had just received a $2 million grant from the National Science Foundation to extend the work into China. "He was a remarkably productive guy," says Robert Drewes, curator of the herpetology department at CAS. Colleagues at the Center for North American Herpetology in Lawrence, Kansas, have established an award for the classification of venomous snakes in his name.

Slowinski is the first academic herpetologist to die from snakebite in the field, according to Drewes. At least two other prominent scientists have died after being bitten by laboratory snakes.

CREDITS: (TOP) VICKY KAUFMAN; (MIDDLE RIGHT) CENTER FOR NORTH AMERICAN HERPETOLOGY; (MIDDLE LEFT) *JAMA* 283(9) (2000); (BOTTOM) FRANK MARGESON