
Sci-Tech Topics

Yellow Fever Re-emerges In Ibero-America

Yellow fever continues to infect people in several Ibero-American countries, including Brazil, Argentina, and especially Paraguay, where the mosquito-vectored viral disease is now being spread in the urban areas of the capital, Asuncion. At least three have died in Paraguay, and 13 cases have been confirmed, leading panicked citizens to flood clinics demanding vaccination.

The area has not seen urban yellow fever since the World War II years, and jungle yellow fever was last seen in the 1970s, but lack of mosquito control—a result of budget cuts and green propaganda—has brought the deadly disease back. Authorities in the capital are now busy spraying insecticide to damp down the danger.

The World Health Organization sent 2 million doses of vaccine the last week in February, and 1 million doses have already been distributed. There is no good treatment for yellow fever, so prevention by vaccination and vigilant mosquito control are of paramount importance, as the U.S. military found out long ago when Walter Reed tackled yellow fever in Cuba at the dawn of the 20th Century.

Rodin: Development Will Cause ‘Climate Change’

Rockefeller Foundation President Judith Rodin’s address to the plenary session of the American Association for the Advancement of Science (AAAS) conference in Boston Feb. 16, focussed on how the unplanned development of cities, mostly in Third World countries, would exacerbate what she termed the “climate crisis.”

A month earlier, Rodin had shared the podium at a Los Angeles press conference with New York Mayor Michael Bloomberg and California Gov. Arnold Schwarzenegger, announcing their new plan, the “Building America’s Future Coalition,” which calls for corporatist/fascist infrastructure investment. The Foundation is bankrolling the ef-

fort, which is designed to help promote Bloomberg and corporatism into the White House.

At the AAAS conference, Rodin called for “smart globalization,” saying that the poor will suffer the most if we don’t deal with climate change, because they rely on nature so much! Her solution, however, is more tourism, which is apparently her concept of development. The private sector must play a leading role in creating “green jobs” in the United States, and we will harness the power of global markets to achieve this, she said.

Two reporters from *21st Century Science & Technology*, both members of the LaRouche Youth Movement, questioned Rodin after her speech. “Why doesn’t the Rockefeller Foundation call for a debt moratorium and the development of nuclear power for these poor countries, if you are actually even concerned about the situation there?”

Rodin was visibly disturbed by the question, replying that the Rockefeller Foundation is hampered from lobbying by stringent laws, so it can’t take a position on these things.

When challenged again on how nothing less than nuclear will develop our human economy, Rodin bolted from the discussion.

The Human Voice Shapes Wind Instrument’s Sound

Measurements with miniaturized sensors showed that the sound production of a tenor saxophone is dependent on the coupling of the vocal tract to the sounding pitch of the instrument, thus confirming a hypothesis demonstrated at an International Caucus of Labor Committees conference seven years ago by bassoonist Mindy Pechenuk.

Researchers at the University of New South Wales in Sydney, Australia, designed sensors that could be placed in the relatively large mouthpiece of a tenor saxophone, to measure the acoustic impedance (ratio of sound pressure to air particle velocity) of the sound produced by the voice. This measurement was compared to a similar one taken for the air flow within the instrument. A graph of the acoustic

impedance for the instrument, plotted against the frequency, would show peaks at the fundamental tone and its harmonics (integral multiples of the fundamental frequency). A similar plot for the acoustic impedance of the voice showed a peak at the fundamental, but not necessarily elsewhere.

Most compelling, the experimenters noted that in the high range of the instrument, known as *altissimo*, it was necessary that the voice produce a resonance at the fundamental tone, or no tone could be produced at all, as was the case for less-accomplished amateur players.

Unfortunately, the sound quality of the notes produced was not considered, and the instrumental measurements can only provide a crude approximation of the sound heard by the developed ear. Despite these drawbacks, the experiments, as reported in the Feb. 8 issue of *Science*, provide a physical confirmation of the more developed thesis presented by Pechenuk some years ago. (See Jer Ming Chen, John Smith, Joe Wolfe, “Experienced Saxophonists Learn to Tune Their Vocal Tracts,” p. 776.)

Toshiba Fast Reactor Test Facility in Japan

Japan’s new nuclear facility in Yokohama includes a high-temperature liquid sodium test loop for research on fast reactors. The test loop will simulate sodium coolant behavior at actual operating conditions and flow.

The fast reactor, which can breed more fuel than it uses, is slated to be the workhorse of Japan’s nuclear program in the future, and a few fast reactors are under design. In addition, Toshiba intends to commercialize the 4S reactor, Super-Safe, Small, and Simple, in the late 2010s. The modular 4S reactor uses sodium as a coolant.

Although the Bush Administration closed down its only sodium-cooled fast reactor, the Fast Flux Test Facility in Washington State, in 2005—for no good reason—the development of a new fast reactor is part of the administration’s Global Nuclear Energy Partnership.