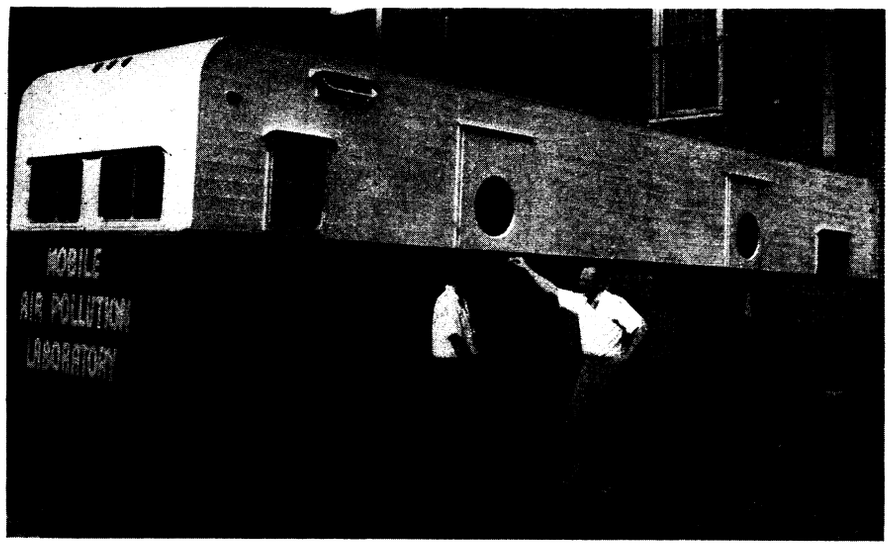

SMOG DETECTING TRAILER—Franklin Institute's newest scientific smog detective, known as "Silent Sam," will be operated from this special mobile laboratory trailer for on-the-spot studies of Los Angeles smog. The device is an ultra-long-path infrared absorption cell and spectrometer designed to test smog-forming chemicals, particularly those that cause eye irritation and crop damage.

GENETICS

Less Virile Breed Survives

➤ STUDIES of flour beetles by scientists at the University of California and the University of Chicago are shedding new light on the struggle for survival of human populations.

Two species of beetles were used for the studies. They seemed to be able to survive indefinitely when bred in separate containers under the same conditions, but there was a difference in the two species in the number of beetles surviving in a given space.

The population equilibrium for one species for one given amount of space was 180, while for the other it was 110. The first seemed to be more virile.

When the two species were placed together, however, the results were completely unexpected. The seemingly more virile species died out 75% of the time in competition with the less virile type, in the struggle for existence.

Statistical studies yielded an explanation that revolves around egg-laying, egg-hatching and egg-eating among the beetles.

The first species had a lower population equilibrium point than the second because, for its own laying and hatching rate, it was more voracious. Fewer of its eggs escaped cannibalism to become beetles.

The egg-hatching time of the second species was longer, and the beetles were less voracious. When alone, this species, therefore, was more populous.

When put together, however, the more populous species' eggs were exposed to the voracious cannibalism of the second species. Therefore, the apparently more "virile" species lost out in the struggle for existence.

The work was done by Dr. Jerzey Neyman of the Berkeley statistical laboratory, and members of the Hull Zoological laboratory at Chicago.

Dr. Neyman said the study is an interesting commentary on doctrines put forth 25 years ago in Europe by Mussolini and by the German eugenical school. Mussolini advocated unlimited fecundity, while the Germans wanted to breed only the tough and the efficient.

Science News Letter, August 11, 1956

WILDLIFE

Washington State Will Import Wild Turkeys

➤ A MOVE to establish wild turkeys in Washington has just been approved by the state game commission in Olympia, Wash.

Under the proposal, wild turkeys from New Mexico will be imported and planted in eastern Washington. New Mexico, in turn, would receive in exchange, Washington blue grouse, chukars or other game species.

Past attempts to establish wild turkeys in Washington have failed, primarily because of the inability of the species selected to survive during the winter months. A game commission spokesman said the turkeys to be obtained from New Mexico "will eat anything."

Science News Letter, August 11, 1956

ARCHAEOLOGY

San Francisco Settled Almost 3,000 Years Ago

➤ NEW DATES for old sites throughout the world are reported by three scientists of Columbia University's Lamont Geological Observatory.

The earliest known evidence of man settling down in the San Francisco Bay area, for example, has now been found to be sometime between 1364 B.C. and 1094 B.C.

A piece of asphalt from Box Elder county, Utah, is believed one of the youngest natural oils in existence, estimated to be more than 30,000 years old.

The measurements were made in the Lamont radiocarbon dating laboratory by the method of carbon dioxide proportional counting. This new dating process was used, the scientists report in *Science* (July 27), because large scale atomic and hydrogen bomb tests "caused sufficient air contamination to render the black-carbon method unreliable unless elaborate precautions were taken and multiple runs were employed."

One of the most significant finds made in the laboratory where antiquity receives a scientific birth certificate is that a rather sharp climatic change occurred in the Atlantic Ocean and the Caribbean Sea some 11,000 years ago. (See SNL, June 30, p. 402.) Studies of ocean-sediment cores indicate that this change marked the transition from the Wisconsin glacial period to the post-glacial time of the present.

The scientists who made the studies, Drs. W. S. Broecker, J. L. Kulp and C. S. Tucek, state that the implications of this find will be reported separately.

Science News Letter, August 11, 1956

ENTOMOLOGY

Chemicals Less Used For Mosquito Control

➤ A TREND toward "more permanent" methods of controlling mosquitoes than by use of insecticides was shown in a survey made by entomologists at Rutgers University, New Brunswick, N. J.

"More permanent" measures include swamp drainage, filling in marsh areas with earth, leveling off marsh areas, filling marshes with water and stocking them with fish which prey on mosquito larvae, and clearing out dense vegetation.

The survey included 120 mosquito control commissions in the United States and Canada. The commissions said they only resort to insecticides when permanent control is impractical or impossible. Most agencies no longer use highly poisonous chemicals that can endanger the health of mosquito control operators and the public, the survey showed.

The survey also revealed that mosquito resistance to DDT is becoming more general, Dr. Joseph M. Ginsburg reports in *Mosquito News* (June).

Science News Letter, August 11, 1956