

RESIDENCE AND MIGRATION OF COLLEGE STUDENTS, 1949-50—Robert C. Story—*Govt. Printing Office*, Misc. No. 14, Office of Education, 61 p., paper, 35 cents. In the past 20 years, there has been practically no change in the proportion of students going outside their states to college.

THE SOUTH AMERICAN HANDBOOK 1951—*Trade and Travel Publications* (H. W. WILSON), 770 p., maps, \$1.50. Travel information, including climate, transportation, hotel facilities, politics and food.

TRANSACTIONS OF CHEMICAL-ENGINEERING CONFERENCES: Fifteenth Annual Meeting—*Industrial Hygiene Foundation*, 45 p., illus., paper, 75 cents.

WHAT'S THE WORLD COMING TO? Science Looks at the Future—A. M. Low—*Lippincott*, 214 p., illus., \$3.00. A British scientist and inventor dips into the future and foresees an amazing world. Published in England under the title "It's Bound to Happen."

Science News Letter, October 6, 1951

Hens exposed to invisible ultraviolet light lay from 10% to 19% more eggs than birds under normal conditions.

STOP SAYING THAT TRAVEL IS TOO EXPENSIVE

Passenger-carrying freighters are the secret to low cost travel

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PHYSIOLOGY

Moving Makes You Shiver

➤ SCIENTISTS HAVE not made up their minds yet whether you are better off just sitting still when you are cold, or whether you ought to get up and move about a little.

One thing is certain, though; you're more likely to shiver if you do move about. This has been shown by two Cambridge University scientists, Drs. E. M. Glaser and R. V. Holmes, who report some experiments they did on shivering in *THE JOURNAL OF PHYSIOLOGY*.

The doctors collected nine healthy men ranging between 20 and 37 years in age and got them to sit with their feet and legs in tubs containing about 15 inches of water cooled down to between 45 and 55 degrees Fahrenheit.

As long as the men just sat quietly they did not shiver, even after an hour and one-half of the cold foot baths, but they all shivered within 4 to 17 minutes after the cooled limbs were exercised, regardless of how long they had been cooled.

The doctors explain this as due to the fact that the blood flow through cooled

muscles is cut way down, so that the amount of cold blood flowing up through the legs into the body is small while the legs are cool. However, exercise of the muscles greatly speeds up the flow of blood and the cold blood which then pours from the legs into the general circulation would seem to stimulate a shivering reflex center.

Drs. Glaser and Holmes say: "It would be tempting to conclude now that slow exercise in a cold place is also a bad thing because it increases the blood flow to cold extremities. Mild exercise, however, causes shivering, and this may more than counteract the augmented loss of heat."

The latter is the case because the work done by the muscles in shivering generates heat so that, as the doctors put it, "it cannot, thus, be predicted whether a person who is cold would gain or lose heat if he moved about a little."

Of one thing they are certain: that hard exercise "is certainly an advantage during severe cooling."

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ENTOMOLOGY

Set Up Insect Ellis Island

➤ A WEST Coast "Ellis Island for Insects" has been set up at Albany, Calif., to handle the safe importation of beneficial insects.

The imported "bugs that fight bugs" are liberated to fight against the agricultural pests which have reached California from foreign countries, having left their natural enemies behind.

For nearly 30 years the University of California's Division of Biological Control has maintained quarantine quarters at Riverside in the southern part of the state.

The establishment of the Albany unit provides additional facilities to test insects that may control agricultural pests in central and northern California. The location is close to steamship and air terminals at San Francisco.

Opened recently, the quarantine laboratory has already received collections from all over the world: parasites of the olive scale from India and Pakistan, parasites of the elm scale and fig scale from France, a small ladybird beetle from Australia which preys on mites.

The quarantine material is handled by the University's College of Agriculture through agreement with the United States and the California State Departments of Agriculture. It is the only state institution in the United States granted quarantine privileges because of its trained personnel and especially-designed facilities for quarantine work.

The new Albany quarantine building is absolutely insect-proof with double windows, smooth walls and ceiling, doors with gasket sealing and an entry system through an ante-room. The quarantine wing is locked at all times and access is restricted.

The facilities at Albany are designed to speed up or retard the rate of development of insects by individual temperature controls in each room. At times this is a factor in handling insects from the southern hemisphere which are conditioned to seasons just the opposite of those in California. Temperature controls for growth-regulating are also useful in breeding insects with complex life histories.

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