

his body to develop resistance to the pollen proteins very much as vaccines or serums provoke resistance to specific disease germs.

There are several well-known manufacturing laboratories that produce these extracts for the use of physicians. They maintain not only the regular working staff members for the manufacture of the extracts, but also support research specialists in immunology and botany, who are constantly at work to increase knowledge of the plants that produce the pollens and human reactions to their poisonous effects. In a relatively short period, as the development of medicine goes, they have contributed much to make life easier for the hapless victims of hayfever.

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Science News Letter, August 7, 1937

SEISMOLOGY

Earthquake Is Located In Gulf of Mexico

A SEVERE earthquake was centered in the Gulf of Mexico about 30 miles northeast of Vera Cruz on Sunday, July 25. Reports to Science Service from leading seismological observatories allowed U. S. Coast and Geodetic Survey experts to determine the quake's location.

Reports were received from Georgetown University, Weston College, Dominion Meteorological Observatory at Victoria, B. C., University of California, Fordham University, Seismological Observatory at Pasadena, Coast and Geodetic Survey at Ukiah, Calif., and Tucson, Ariz., Dominion Observatory at Ottawa. (Epicenter at 19.5 N 96 W. Time: 10:47.2 p. m. EST, Sunday, July 25.)

Science News Letter, August 7, 1937

For success in transplanting ornamental trees, a scientist recommends that as much soil as practicable should be taken undisturbed with the roots.

SEASICKNESS

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SEASICKNESS



HUNTING ICE AGE MAN

With scientific precision WPA workers hunt hopefully for Ice Age man on Abbott Farm, New Jersey. Thousands of later Indian relics have come to light, as shown in foreground, where an earth block has been isolated because it contains a clay jar. Workers record depth of the jar in earth and will dig it out with trowels and fine implements. See page 86 for story.

MEDICINE

Earhart Plane Loss Stays Collection of Micro-Organisms

AMONG the scientific experiments under way on the world-girdling flight of Amelia Earhart and Capt. Fred Noonan was one involving the collection of micro-organisms from the air, it has been revealed by Fred C. Meier, chairman of the National Research Council's Committee on Aerial Dissemination of Pathogens and Allergens. The objective of this committee is the charting and recording of the manner in which harmful organisms and material which produce allergy are transmitted. The equipment carried on the Earhart plane was of the type developed by Col. Charles A. Lindbergh and used by him in 1933 on the North Atlantic and Greenland flight with Mrs. Lindbergh.

"Miss Earhart, in this phase of her research program, was utilizing the airplane to advance knowledge in a field opened by Louis Pasteur in classical experiments which he reported in 1860 and which were followed up by medical men and botanists of many countries during the 19th and 20th centuries," said

Mr. Meier. "Results of such studies of the upper air bring to light fundamental principles of the spread of microscopic organisms by winds. Better knowledge of these principles leads to many practical applications, perhaps the most important of which are improved measures for control of diseases of plants and animals," he continued.

Since the Lindbergh flight of 1933, the "sky hook" has been standard equipment for these investigations. It was carried on the 1934 Alaskan expedition of the Army bombers, and by Mr. Meier on flights over practically all sections of the United States. With the aid of Pan American Airways, the instrument was used to bring together valuable information concerning content of the air over the Caribbean Sea. Major Albert W. Stevens carried specially designed equipment for making similar collections on his record breaking flight in the National Geographic-Army Air Corps stratosphere balloon, Explorer II.

From Java, in a telephone conversa-

tion with her husband, George Palmer Putnam, Miss Earhart reported making systematic aerial collections and notes on her equatorial flight. "Such a series of collections," said Mr. Meier, "taken with-

in a relatively short space of time from the air over the vast bodies of water distributed around the earth's circumference would be an invaluable contribution to our knowledge in this field."

Science News Letter, August 7, 1937

MATHEMATICS

Are You Buying a Car or Home? Then Think Mathematically

Many Involved Heavily in Installment Payments Are Unable to Figure the Interest They Are Charged

MATHEMATICS touches the life of everyone in the nation. The common thinking that mathematics is for the Prof. Albert Einsteins and other mathematicians of the world is costing the average man dollars each year in his purchases of a home, automobile or other things on the installment plan.

This is the warning issued in an interview by Dr. E. R. Hedrick, the well-known mathematician, now vice-president of the University of California at Los Angeles and formerly of Harvard University.

Most people have a dim realization that mathematics is somehow behind many of the marvels which the physical sciences and engineering have created: airplanes, radio, great bridges and the automobile.

The glorified uses of mathematics to these ends, says Dr. Hedrick, may perhaps blind one to the more humble uses it has in the life of everyone, everywhere.

"Buying things on the installment plan," notes Dr. Hedrick, "ranges all the way from the purchase of a radio to buying a house. It brings with it instantly the question of interest charges on money.

"If a purchase of \$100 involves the payment of five dollars down and five dollars a month for 22 months, few people can figure the rate of interest paid. Yet a reasonable understanding of such interest charges is within the power of every high school graduate.

Waive Tiresome Thought

"People are too prone to waive what seems to be tiresome thought and to accept vague statements in place of exact knowledge; many who are deeply involved in such installment pay-

ments do not know the interest rates that they are actually paying. I think they should know.

"Mathematical thinking really is the difference between having vague generalities and precise information. In the simple instance of automobile driving even a child knows that gasoline makes cars run. A beginning in mathematics has been made when one asks how many miles the car will go on a gallon of gasoline. The answer replaces qualitative information with quantitative fact and the moment this happens, mathematics begins to function.

"The next stage in mathematics rises," continued Dr. Hedrick, "when one realizes that a gallon of gasoline will carry the car different distances if the speed of the car changes. If this question is thought out, maybe by actual trial, one may find a best speed for economy in driving. Thus arises a prime mathematical thought: that there is a *best speed*. Such thinking is a simple instance of the idea of best performance in hosts of cases. Such ideas are present in many human problems, public and private.

For Good Citizenship

"The youth of the country should be given all the training that is possible in ways of mathematical thinking, not alone for their own sakes, but also for the best interest of society as a whole. To make good citizens, to vote intelligently, we should train young people not in vague generalities, but rather to think intelligently in quantities—at least to know that there are best solutions to most public and private problems that involve quantities.

"To say that accurate ways of thinking about quantities is not needed by the mass of the people seems to me to

RADIO

August 10, 4:15 p. m., E.S.T.

THOSE ANTS—Dr. James Forbes of Fordham University.

August 17, 4:15 p. m., E.S.T.

WONDERS OF THE HEAVENS—Dr. F. R. Moulton, noted astronomer.

In the Science Service series of radio discussions over the Columbia Broadcasting System.

be foolish," said Dr. Hedrick in concluding. "To eliminate mathematical thinking from the training of our youth not only endangers their own lives and closes the door to them for comprehension of the achievements of modern science and engineering; it also endangers the safety of the nation whose public problems cannot be solved by an electorate incapable of mathematical thinking."

Science News Letter, August 7, 1937

AGRICULTURE

Blue Grama Grass Can Now Be Seeded Cheaply

BLUE grama grass, native species of especial value for restoring the old cattle range and preventing dust storms, can be seeded now at a fraction of its one-time estimated cost through machine methods of stripping, threshing, and cleaning seed from stands still on the Plains. Workers of the U. S. Department of Agriculture have been able to obtain seed of a high percentage of purity at 79 cents a pound, while seed with a larger admixture of alien seeds could be produced at 19 cents a pound.

Science News Letter, August 7, 1937

The SEX TECHNIQUE IN MARRIAGE • By I. E. Hutton, M. D.



"Dr. Ira Wile describes the book as a clear, succinct, non-emotional, authoritative and conservative exposition of the practical factors involved in making marriage successful on the sexual level. That describes the book exactly. It is primarily concerned with the conduct of the honeymoon and with the technique of the sexual performance."

—Dr. Morris Fishbein, Editor Journal American Medical Assn., in Hygeia.

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