

## MEDICINE

## Encephalitis Outbreak In Pinellas County, Fla.

► WITH INCREASING deaths from suspected encephalitis reported in Pinellas County, Fla., mosquitoes, birds and animals of the area are being studied to determine the cause of the outbreak, Dr. Delmar Ruthick, epidemiologist at the Communicable Disease Center of the U.S. Public Health Service, Atlanta, Ga., told SCIENCE SERVICE.

"I would not advise anyone to go to Pinellas County at this time," Dr. Ruthick said, adding that mosquitoes are believed to have been the principal carriers of the disease. A strong mosquito-repellent application is recommended for those who go out at night in the area.

Between July 20 and Sept. 3, 137 suspected cases, including 14 deaths, have been reported from Pinellas County. Encephalitis is a brain inflammation disease commonly called sleeping sickness because of drowsiness and mental confusion that often accompanies it. A sudden fever as high as 105 degrees attacks the majority of victims.

There are three types of encephalitis found in the U.S. in the West, Middle West and East. In the summer of 1933, St. Louis encephalitis, named after an outbreak in the Missouri city, attacked 1,000 persons.

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## RADIOLOGY

## High Radioactivity Found In Bomb Test Products

► TWO RADIOACTIVE materials, cesium-137 and iodine-131, have been found in higher concentrations than previously known—one in humans and the other in cattle.

Both radioactive compounds are made and thrown into the atmosphere during nuclear tests, then later washed to the earth's surface in fallout.

Cesium-137 is a comparatively little-studied chemical that concentrates in bone and muscle-building tissues, particularly in very young children. Iodine-131 concentrates in the thyroid gland, most frequently from milk and other dairy products.

Drs. Philip F. Gustafson and Robert W. Anderson of Argonne National Laboratory, Argonne, Ill., tested the concentration of cesium-137 from ribs obtained in autopsies of 70 persons in Chicago during 1961.

They found that the concentration of cesium-137 in rib bone is at least equal to the amount in the entire body. They conclude that the radioactivity emitted by cesium-137 after it enters the body may be much more important than previously thought.

The radiation dose to adult rib bone in 1961 in the Chicago area was greater from cesium-137 than from strontium-90, which has received wide public attention as a dangerous fallout product.

The Argonne scientists urge further investigation of this radioactive fallout product

in view of the resumption of nuclear tests by both Russia and the United States.

Drs. Clifton Blincoe and V. R. Bohman of the University of Nevada tested the amounts of radioactive iodine-131 found in the thyroid glands of cattle slaughtered for the meat market during the time of the Russian nuclear tests in the fall of 1961. They found that the radiation dosages were 25 to 40 times higher than the guide figures used as protection standards for humans.

However, they also note that human thyroids are reported to have considerably lower concentrations of iodine-131 than cattle. They suggest continuous monitoring of cattle thyroids to check on the level of radioactive fallout of iodine-131.

Both reports on radioactive fallout products were made in Science, 137:668 and 691, 1962.

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## EDUCATION

## U.S. School Enrollment Continues to Rise

► ENROLLMENT in the nation's public and private schools from kindergarten through college will reach a new all-time high of 51.3 million in the 50 states and the District of Columbia in this school year, 1962-63, the U.S. Office of Education estimated in Washington. This is an increase of 2 million over the enrollment of 49.3 million for the 1961-62 school year.

The Office of Education also estimated that more than 1.7 million classroom teachers will be needed by the public and non-public elementary and secondary schools in the 50 states and the District of Columbia. This number is 3.6% greater than the 1.684 million employed in 1961-62.

Anticipated enrollments in public and nonpublic schools from kindergarten through grade 8 are estimated at 35 million for the 50 states and the District of Columbia, an increase of 800,000. In grades 9 through 12, the increase is expected to be 900,000.

In institutions of higher education, both public and private, an enrollment increase of 300,000—from 4.3 million to 4.6 million—is anticipated.

Rising enrollments in kindergarten and elementary and secondary schools are due chiefly to increased birth rates since 1945. An earlier surge in births in 1940-43 has been reflected to some extent in college enrollments since 1959-1960.

Statisticians anticipate, however, that the first really sharp increase in college enrollments will come at the beginning of the 1965-66 school year. At that time high school graduates born in 1946 will apply for admission. Between 1945 and 1947, the annual number of births increased by 1 million. This is expected to result in substantial increases in college enrollments in the three years beginning in 1965-1966.

As yet, the Office of Education said, steadily mounting college enrollments should be credited largely to the fact that there is a growing interest in attending college rather than to higher birth rates.

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# IN SCIENCE

## BIOLOGY

## "Extinct" Clam Found In Golf Course Sand Trap

► AN "EXTINCT" fresh-water clam-shrimp has been rediscovered in the sand trap of the golf course in Woods Hole, Mass.

The tiny two-valved animals, considered non-existent for 83 years, went unseen by golfers teeing off the fourth tee nearby until recently, when two scientists rediscovered a fairly large population of the creatures in the trap. Eggs and larvae were collected for identification.

Named for the famous explorer Louis Agassiz, *Eulimnadia agassizii* seemingly disappeared after it was first found in 1873 on Penikese Island in Buzzards Bay, Mass. The reappearance of the half-inch organisms in the Woods Hole Golf Course is unusual since the sand in the trap is only that screened from an ocean beach at Nobska, the researchers reported.

Drs. Donald J. Zinn of the department of zoology at the University of Rhode Island, Kingston, and Ralph W. Dexter of the department of biological sciences, Kent State University, Kent, Ohio, reported the discovery in SCIENCE, 137:676, 1962.

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## SPACE

## U.S., Japan Joint Space Communications Planned

► THE UNITED STATES is considering a Japanese proposal to establish a joint telecommunications satellite program. Japan is anxious to establish a telecommunications satellite system for the 1964 Olympics to be held in Tokyo.

Leonard Jaffe, a National Aeronautics and Space Administration representative in Tokyo, has been authorized "to conduct technical discussions" with the appropriate agency of the Japanese Government "regarding the feasibility of cooperative arrangements," a State Department spokesman told SCIENCE SERVICE.

If it does seem feasible, the United States will then open negotiations with Japan to conclude an agreement similar to those with the United Kingdom, France, West Germany and Brazil for the use of Telstar. Such negotiations currently are underway with Italy.

Japan now has the technical capability to establish a high altitude satellite communications system that could be superior to the low orbit Telstar system; but it lacks the economic resources to do this independently. The U.S. has Synchron, a high altitude space communications system, under research and development. It does not appear likely, however, that the U.S. and Japan will combine their efforts in this direction now.

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# E FIELDS

## PSYCHOLOGY

### Study Shows Passionate Latin American a Myth

► THE PASSIONATE Latin American is a myth. Americans north of the border are far more romantic and passionate than the Latins, two university surveys show.

In a student survey at the National University of Mexico and the University of Texas, U.S. students checked such words as "kissing," "exciting," "desire," "hunger" and "melting" much more often than Mexican students to describe their feelings of love. Mexicans described their passion with "deceit," "sin" and "betrayal" four times as often as their American counterparts.

A majority vote went to the descriptions of "respect" and "faithfulness," "loyalty" and "trust," but considerably more Americans checked these virtues.

The American Psychological Association meeting in St. Louis, Mo., was told that 55% of Mexican women and 53% of Mexican men queried associated love with "jealousy" in contrast to 44% of American male and 27% of American female students.

American students expect love to simultaneously give security, sensual excitement, friendly companionship and strength. At worst, it is a source of worry, perhaps of hunger, but rarely is it supposed to bring deceit, disloyalty and disillusionment—at least in the first and second years of college included in this survey.

Two hundred and forty-two Mexican students and 310 U.S. students participated in the survey.

Robert F. Peck, University of Texas, and Rogelio Diaz-Guerrero of the National University of Mexico reported the study.

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## EDUCATION

### Chile Forms Group To Hold Science Fair

► A NATIONAL COMMISSION for the popularization of science in Chile was formed in Santiago, Chile, when 20 leaders in public and private education were brought together by the Superintendent of Public Education, Sr. Jose Herrera Gonzalez, to plan the first Chilean Science Fair, from which student exhibits will be sent to the U.S. Atomic Energy Commission's Atoms at Work exposition opening Oct. 20. The exposition will last a month.

The Chilean Science Fair, in which all Chilean high school students are being invited to participate, will culminate Oct. 25 and the winning exhibits will be shown in the latter two weeks of the atomic exhibit.

The new national commission, headed by Dr. Harold Behrens, chemistry professor of the University of Chile, plans to continue the science fairs in coming years. General

stimulation of science interest, participation and appreciation through schools, press, radio, TV and lectures as well as fairs is also planned.

General, vocational and agricultural secondary schools will feel the stimulation of the commission, as will private and parochial schools. Chilean colleges are participating because they will continue training the students who are discovered and inspired by doing projects and making exhibits for the science fair.

The director of SCIENCE SERVICE, Dr. Watson Davis, visiting Chile for the purpose, put at the disposal of the new commission experimental materials and literature that are being sent to all secondary schools in Chile. The program is based on the extensive science fair activity in the United States in which a million students participate each year.

A Mexican science fair held successfully this year for the first time worked out methods and translations that are being applied to the Chilean situation with U.S. Atomic Energy Commission cooperation.

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## EDUCATION

### "STEPS" to Better Science Education

► SCIENCE TEACHERS trained before the recent giant strides in scientific achievement, lack of modern laboratory equipment, lack of communication, and lack of utilization of available facilities plague the space-age teaching of science in many areas of the nation. You ask, "Why don't they . . .?" They are.

STEPS is not just more alphabet soup. STEPS, or Science Teaching Exploring for Excellence Program Steps, is a project of the U.S. Office of Education. It seeks to utilize local initiative and local scientists. It strives to make full use of teachers who have participated in workshops and institutes sponsored by the National Science Foundation and of equipment available under the National Defense Education Act.

Coordination and planning of local, state and national educators and officials is directed toward full use of available resources to ensure a science education program worthy of today's age.

Initial planning for a STEPS program is between the local area and the State Department of Education. The local area may be a school, city or county system, or several counties pooling their efforts and resources.

Plans are made by assessing the present program, evaluating available human and material resources, outlining immediate and long-range goals, and setting a timetable for action to be taken. The program is evaluated from time to time, and progress reports are made.

Final reports might be offered for publication to professional journals, or the U.S. Office of Education may consolidate reports of several projects into a single publication for national distribution.

Areas in 20 states already are taking STEPS to improve their science education, and more areas are investigating possibilities.

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## PSYCHOLOGY

### TV Advertising Repetition Influences Child Viewers

► REPETITION in television advertising appears to influence child viewers to use the products advertised.

But less intelligent children watch TV more often than brighter youngsters, a psychologist told the 70th annual convention of the American Psychological Association in St. Louis, Mo.

A study of 100 third-grade children in a central Pennsylvania community showed that only seven did not watch TV some time during the week, although 13 of the families had no television in the home. The group watched TV almost as many hours per week as they spent in school, as found in some other studies. The average was about 25 hours each week, with a high of 53 hours.

There was some tendency for those who spent most time before the sets to come from lower socioeconomic levels, to be less intelligent and to do more poorly in school. But low achievement is not caused by television. It is related to the fact that "the less intelligent child prefers to watch television more often," the researcher said.

Despite repetition of product advertising, however, 28% of the children tended to confuse trade names. Of a total of 37 mixups (out of a possible 300), 19 products were confused with similar products, three were advertised on the preceding program and three on the following program.

Of the ten most popular programs, seven were "children's" programs, two were adult westerns and one was adult comedy. Of the total of 42 programs named, 31% were in the western category, 23% were comedy and 16% drama.

Dr. Glenn W. Thompson, assistant professor of psychology, Allegheny College, Meadville, Pa., reported the study.

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## BIOLOGY

### Volunteers End 14-Day Isolation in Pure Oxygen

► FIVE MEN who were isolated in a giant 30-foot space chamber for two weeks completed the equivalent of 336 orbits around the earth.

They were the last of four groups of volunteers to take part in the National Aeronautics and Space Administration's pure oxygen atmosphere study in the portion of the program being conducted at the Republic Aviation Corporation plant, Farmingdale, Long Island.

The project is part of the development of a simple, lightweight, single-gas cabin atmosphere for Project Gemini and future man-in-space programs.

During confinement in the chamber each of the volunteers put in a ten-hour day while running through a total of 683 specific tests, both physiological and psychological. The aim was to determine their reactions and work performance under varying pressures of a pure oxygen atmosphere.

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