

GENERAL SCIENCE

Mexican Science Exhibits

The first youth science fair in Mexico will be held in late March, after which the best projects will be shown in the "Atoms at Work" fair at Chapultepec, Watson Davis reports.

► MEXICO'S YOUNG SCIENTISTS in secondary schools are hard at work on science exhibits that will be shown at the end of March in the first Mexican youth science fair. Then a few of the best exhibits will be shown and the students themselves will participate in the "Atoms at Work" exhibit to be on view in an inflated plastic structure in Chapultepec Park for a month beginning April 2.

A committee of leading scientists and educators named by Dr. Jaime Torres Bodet, Mexico's secretary of education, has organized Mexico's first participation of youth in a science fair. The Mexican National Nuclear Energy Commission and the U.S. Atomic Energy Commission sponsor both the public atoms exhibit and the organization of the student science fair.

Announcements of the new science hobby activity and suggestive experimental kits were sent to 1,927 Mexican schools throughout the nation by the organizing committee. The kits were supplied by Science Service on behalf of the U. S. Atomic Energy Commission.

Meetings were attended by supervisors and inspectors of science in the Department of Public Education and by science teachers from both public and private schools.

Experimental kits consisting of six units of "Things of Science" devoted to atomic energy, mathematics of the straight line, chemical models, acidity test papers, pendulum, and atomically irradiated seeds were made available to each high school as examples of how projects could be done with simple materials.

The secretary of the committee, Dr. Victor Flores Maldonado of the National Polytechnic Institute, prepared the necessary information for the fair organization and translated the directions accompanying the kits sent to the schools.

Visits have been made to the Mexican Committee and schools by representatives of SCIENCE SERVICE, which conducts the National Science Youth program in the United States, consisting of Science Clubs of America, National Science Fair-International and Science Talent Search, involving almost a million American students.

Ernest P. Garcia, Spanish-speaking high school principal from Magdalena, New Mexico, who is experienced in science teaching and fair organization, spent a week visiting schools and teachers.

Director Eugenio Mendez of Mexico's Polytechnic Institute, the leading technical university, is chairman of the organizing committee, which also includes Subdirector Luis G. Aguilar Alvarez of the Polytechnic Institute, Director Justo A. Zamudio of secondary education of the Department of

Public Education, Secretary General Salvador Cardona of Mexican Nuclear Energy Commission, and Prof. Augusto Morena Moreno of the National University of Mexico.

The gigantic inflated plastic bubble building in which the exhibit will be shown has arisen upon one end of a military polo field. In it are being installed an isotope-producing reactor, nuclear laboratories, a theater, a classroom and exhibit rooms. The Mexican student exhibits will be among the displays shown.

The "Atoms at Work" exhibit has been visited by thousands of Latin Americans when installed at Buenos Aires, Rio de Janeiro and Lima in previous months. From Mexico the American AEC exhibit will travel to Santiago, Chile, for a month's showing this fall.

Students are undertaking projects in any field of science of their own selection. Their inquiries are not limited to atomic energy, but many will be in physics, chemistry, biology and mathematics, which are fundamental sciences that are involved in the application of atomic energy to peaceful pursuits.

Mexican educational authorities are confident that the participation of students in projects of their own choosing will speed the training of those who will be the Mexican scientists and engineers of the future. It is expected that the Mexican science fair will become an annual event and that colleges, industries, scientific laboratories, as well as government agencies, will cooperate in this aid to youth.

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PHYSIOLOGY

Rat Growth Slowed by Increased Gravitation

► RATS WHIRLED in a centrifuge to produce an increased gravitational field have a slower growth rate than normal rats, a scientist has found.

The amount of food required to produce an equal increase in weight in spinning animals was "much greater than that required by their controls," Dr. F. L. D. Steel of St. Bartholomew's Hospital Medical College, London, reports. Both the size reached by an animal and its rate of growth are determined by many factors, including the gravitational field.

Theory suggests that the stronger the gravitational field, the smaller the animal produced. Growth rates under increased acceleration have also been studied in the fruit fly, birds, mice and hamsters.

A United States scientist, Dr. Charles C.

Wunder of the State University of Iowa, and his co-workers have found that the effects on growth of spinning fruit fly larvae in a centrifuge depends on the initial size of the organisms. They also found that oxygen consumption is increased during exposure, and that the reaction to an increase in gravity changes with the temperature.

The centrifuge used by Dr. Steel allows him to spin four rat cages to produce about three times the normal gravitational field. His research is reported in *Nature*, 193:583, 1962.

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CONSERVATION

Pink Salmon Found In Great Lakes

► THE PINK SALMON has been found in Lake Superior for the first time.

Pink salmon, one of the more common commercial salmon on the West Coast, have been caught recently at the mouth of a river emptying into the lake.

The Lake Superior salmon escaped from a Canadian fish hatchery, C. W. Threinen, administrative assistant in the Wisconsin Conservation Department, said in Madison, Wis. He said the salmon could be an interesting and welcome addition to the list of Lake Superior fishes, noting that early maturity gives the salmon an advantage in competition with the parasitic sea lamprey, which now infests the Great Lakes.

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VETERINARY MEDICINE

Vaccine for Cattle Disease Found

► A NEW VACCINE against the dread cattle disease, mastitis, has been found.

Controlled research on cattle vaccinated with a substance extracted from infected cows and combined with egg yolk seems to show that the *Staphylococcus* bacterium that causes mammary infections can be controlled.

The developers of the vaccine, Drs. Hans Blobel and David T. Berman of the University of Wisconsin in Madison, said that more studies are needed before large-scale vaccination is undertaken.

Previous vaccines had increased animal resistance to mammary infections with the homologous staphylococcal strains only. The doctors reported that with the new vaccine, "incidence and severity of clinical cases of mastitis, including those caused by heterologous strains of *Staphylococcus*, were markedly reduced in vaccinated cows."

Fifty percent of the total cow population are infected with mastitis. At least 25% of these are sick at any one time.

Mastitis has been a widespread problem for generations. It attacks the mammary glands and disqualifies the milk for human consumption. Where it comes from is still a mystery.

The researchers reported their findings in the *American Journal of Veterinary Research*, 23:7, 1962.

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