

GENERAL SCIENCE

Scientists to Explore Primitive Australian Area

➤ ARNHEM Land, a primitive region on the north coast of Australia, will be explored by a party of American and Australian scientists, beginning at the close of the rainy season in March. The two-nation party of scientists will study the stone age savages of the little-known area and its animal and plant life.

Four of the expedition's five bases will be at Christian missions at the heads of navigation of mainland streams, while the other base will be on Groote Eylandt (Big Island) off the coast.

Arnhem Land, about the size of the state of Maine, was discovered by the Dutch and named for the yacht of early explorers. It is east of Darwin, on Australia's north coast. The aboriginal inhabitants long held a savage reputation as cannibals, and they are still considered difficult to approach. Natives will, however, be used as porters for trips inland.

The expedition will land in Arnhem Land from a small schooner which will carry the party to coastal stations on Van Diemen Gulf, the Arafura Sea and the Gulf of Carpentaria.

Charles Percy Mountford, ethnologist of the South Australia Museum, Adelaide, will be leader of the expedition, which is sponsored jointly by the Smithsonian Institution, the National Geographic Society and the Commonwealth of Australia. American scientists from the Smithsonian Institution who will be in the party include: Frank M. Setzler, head curator, department of anthropology; Dr. David H. Johnson, associate curator, division of mammals; Herbert G. Deignan, associate curator, division of birds; and Dr. Robert R. Miller, associate curator, division of fishes.

Science News Letter, January 17, 1948

GENERAL SCIENCE

Indian Scientists Doing Important Research Work

➤ NOT only politically, but also in the scientific field, India has reached maturity. A visit to the Royal Institute of Science at Bombay shows that Indian scientists have much to contribute to international science.

Quite young as scientific institutions go—the Royal Institute of Science celebrated its Silver Jubilee only two years ago—it has already left its mark upon

the scientific life of India and some of its alumni are world famous. Enough to mention Prof. H. J. Bhabha (now head of the Tata Institute of Fundamental Research, Bombay) of cosmic ray fame; Prof. V. V. Narlikar (now head of the department of mathematics, Benares University) known for his work on relativity.

The Principal of the Science Institute, Prof. Mata Prasad, has done outstanding work in colloid and magneto-chemistry and, together with a group of energetic research students, is continuing to investigate the preparation and the formation of gels, more particularly soap gels in non-aqueous media.

In organic chemistry, Prof. R. C. Shah is covering a wide field, including the chemistry of coumarins and chromones, derivatives of salicylic acid and new method of preparation of saccharin and chloramine-T.

In the department of inorganic chemistry, researches have been carried out by S. M. Mehta and his students on alkaline earth sulphates, amphoteric oxides, boric acid and upon the recovery of titania from bauxite.

In the physics department, work is in progress on the scattering of light by dust and smoke particles, on dipole moments, on the fluorescence of synthetic materials. Dr. N. R. Tawde, professor of physics, is working on the spectra of flames of hydrocarbons.

Equally important work is being carried out in the departments of botany and zoology of the Institute.

Science News Letter, January 17, 1948

ENTOMOLOGY

Tobacco with 10% Nicotine Used to Kill Insects

➤ FINELY - GROUND tobacco so strong in nicotine that not even the most confirmed snuff addict would ever dip or chew it—not more than once, anyway—has been patented as a possibly profitable commodity. Intended for poisoning insects, it has had its natural nicotine content stepped up to 10% by the addition of straight nicotine sulfate. The pulverized leaf and stem tissue serves as an efficient and low-cost carrier, in place of the mineral dusts hitherto employed.

The inventor of this new natural insecticide, Robert B. Arnold of Richmond, Va., has assigned rights in his patent, No. 2,431,672, to the Tobacco By-Products and Chemical Corporation.

Science News Letter, January 17, 1948

IN SCIENCE

ENGINEERING

Heating Costs Reduced by Mixing Sizes of Coal

➤ HOME HEATING costs may be reduced where anthracite is used for fuel by using in connection with the ordinary egg or stove coal some of the pea, buckwheat and rice sizes, James Boyd, director of the U. S. Bureau of Mines, said.

These small sizes are plentiful, cost less than the larger, and have a heating value almost equal to that of egg, stove and chestnut sizes, he declared. For the best results, the larger and the smaller sizes should be burned in alternate layers. The layer method is particularly advantageous in banking or mild weather firing because the percentage of the smaller sizes can be increased at these times, thus producing a slower burning fire which will last much longer before refueling is necessary.

Science News Letter, January 17, 1948

PHYSIOLOGY

Sex Influences Man Less Than Lower Animals

➤ MAN differs from mice in being less influenced by sex and body chemistry and more by love in his courtship and mating.

But no vertebrate animal is exclusively controlled by physical factors in finding a mate and raising its young, Prof. Frank A. Beach, psychologist of Yale University, reports in a new book published by Paul B. Hoeber, "Hormones and Behavior." Studies of sex behavior are reported not only for man and the higher animals but also for other creatures much more distant on the evolutionary scale, such as fish, frogs, snakes and even paramecia.

As we go up in the evolutionary scale, Prof. Beach says, the relative importance of the hormones and body chemistry becomes less and less important and psychological factors more and more evident.

The chimpanzee is most like man of all the animals—so much so that over-sexed animals, masturbation, "rape" and even "prostitution have been observed in these closest of man's relatives.

Science News Letter, January 17, 1948

E FIELDS

MEDICINE

Epidemic Nausea Now Called Virus X Disease

➤ IF you and each member of your family have one after another had a sudden attack of nausea and vomiting which laid you low for 24 to 48 hours, you were probably suffering from epidemic nausea.

This apparently new disease, recently christened virus X disease in Los Angeles, is not so new to doctors who have been seeing cases for the past several winters. It is believed to be caused by a virus, but the virus has never been isolated and therefore got the name X, for unknown.

The majority of the cases of illness in Los Angeles are probably due to the common cold and epidemic nausea, Dr. Wilton L. Halverson, director of public health, reported in answer to a Science Service inquiry.

Blood tests have shown the presence of influenza virus A in the southern California area, he stated. Virus isolations from nose and throat washings have been suggestive but thus far not conclusive for virus A.

So probably the hundreds of thousands of cases, according to unofficial reports, of a mysterious disease were made up of some cases of the 'flu plus many bad colds plus attacks of epidemic nausea. Between them, the illnesses have caused 20% school absenteeism, the state health officer reported to the U. S. Public Health Service.

No work on virus X disease has been done at the Hooper Foundation, famed for its virus researches, at the University of California School of Medicine in San Francisco.

Science News Letter, January 17, 1948

AERONAUTICS

Wind Tunnel Duplicates Upper Atmosphere Pressure

➤ A TINY wind tunnel at the University of California at Berkeley is said to be the world's first low pressure type to duplicate actual pressure conditions up to an altitude of over 45 miles.

It is a model with a test section only

one inch square. Its purpose is to test design features for a 10-inch square operating tunnel now under construction. With this larger tunnel, scientists will be able to explore for the first time a wide belt in the upper atmosphere, extending up perhaps to 300,000 feet.

The principal object of this tunnel is to develop precise information on the fluid mechanics of supersonic speeds in extreme altitudes. These are speeds faster than the velocity with which sound travels. The first application of the information gained will be in the fields of guided missiles, rockets and airplanes.

There are already several supersonic wind tunnels in use in the United States but they blow air over models of rockets and airplanes at high pressures. They do not necessarily give a true picture of what happens to a missile, rocket or airplane traveling at supersonic speeds in the rarified atmosphere and low temperature at altitudes 10 miles or more above the earth.

Science News Letter, January 17, 1948

PSYCHOLOGY

Twins Over 60 Studied For Problems of Aging

➤ WANTED! Twins, over 60 years old, residents of New York, to help scientists discover the social and psychological factors needed to preserve physical and mental health in old age.

Dr. Franz J. Kallmann of the New York State Psychiatric Institute at Columbia-Presbyterian Medical Center may not actually have run such a want ad, but he says he still needs more twins.

The study is the first of its kind ever attempted. With a \$31,500 grant from the Rockefeller Foundation, renewal of an original gift made in 1945, the study will continue for three more years.

The present number of aging twins available for continuous observation totals more than 1,500 persons. Their ages range from 60 to 94 years. They include more than 500 pairs of whom both members are still alive and actively cooperating by providing life histories and the extent of their activities in aging years.

Analysis of these data, Dr. Kallmann says, will give a valuable opportunity to study life histories of twins in relation to the many problems of aging and longevity and the mental health aspects of marital adjustment, mate selection and the effect of working habits.

Science News Letter, January 17, 1948

GEOPHYSICS

Warns Quakes May Damage St. Lawrence Waterway

➤ A WARNING that earthquakes may endanger part of the proposed St. Lawrence Waterway was issued in Ottawa by an engineering geologist.

Dr. Charles P. Berkey of Columbia University reported to the Geological Society of America that the strong Massena-Cornwall earthquake in September, 1944, "covered precisely those portions of the St. Lawrence River and side country which would be occupied by the principal works of the St. Lawrence Waterway development as proposed by the U. S. Engineers."

The scientist, who made a study of the area immediately after the quake, predicted that the greatest danger would be to the main canal. This would be built on loose sands and silt where a tremor does the most harm, Dr. Berkey said. Dams, locks and power house, built on a sound rock foundation, would not have been damaged by the quake of three years ago. He recommended "special handling" in the building of the canal and other structures on the loose ground area of the waterway.

Dr. Berkey explained that the area between Massena, N. Y., and Montreal has a number of quake-making faults. The possibility of future disturbances should not be overlooked in planning the St. Lawrence development, he cautioned.

Science News Letter, January 17, 1948

BOTANY

Antibiotics May Aid Fight Against Plant Diseases

➤ ANTIBIOTICS, like penicillin and streptomycin, not only kill germs attacking human beings and animals; they can be put to good use against plant diseases as well. Profs. Curt Leben and G. W. Keitt of the University of Wisconsin told of using a still unidentified substance extracted from *Streptomyces*, source of streptomycin, in completely controlling the difficult diseases known as apple scab and early blight of tomatoes. When the leaves of the plants being studied were sprinkled to simulate rain, the substance, whatever it was, was not washed off. We may yet see whole orchards sprayed with drugs that we now think of as usable only in hospitals and sickrooms.

Science News Letter, January 17, 1948