

GENERAL SCIENCE

Academicians Visit USA

American Philosophical Society and National Academy of Sciences entertain foreign scientists at their fall meetings in Philadelphia and Washington.

Highlights of the Philadelphia meetings are in this issue and the next issue will contain reports of the Academy sessions in Philadelphia and Washington.

➤ A UNITED NATIONS in science, comprising 34 official representatives from the Academies of Science of foreign countries, was a feature of the autumn meeting of the American Philosophical Society in Philadelphia. The group, forming the largest and most distinguished body of overseas scientists to visit America since the war, also attended the meeting of the National Academy of Sciences, the first two days of which were moved from Washington to Philadelphia due to the Washington hotel strike.

There was some whispering of an "Eastern bloc" when the Academy of Sciences of the USSR failed to appoint a delegation, and when a duly appointed Polish delegation failed to leave Warsaw. However, it is pointed out in refutation that three countries usually considered as within the Soviet "sphere of influence" — Czechoslovakia, Hungary, and Rumania—all had their representatives here.

Oldest organization represented is Italy's Accademia Nazionale dei Lincei, organized in 1603; youngest is the Argentine Academia Nacional de Ciencias Exactas, which dates from 1937. Countries whose national academies were represented included Great Britain, France, Sweden, Denmark, Belgium, Hungary, Switzerland, Australia, Norway, New Zealand, Canada, Mexico, Peru, Brazil, Greece, China, India and Argentina.

Million Plants Unnamed

➤ ABOUT A MILLION plants are now known by name to botanists, Prof. Liberty Hyde Bailey, veteran Cornell University plant scientist, stated before the meeting. At that, the task of botanists is less than half accomplished, for he estimates that at least another million plant species await naming and exact description.

This situation makes a sharp contrast

with the botany of less than two centuries ago, when the great Swedish naturalist Linnaeus believed that the total number of plant species in the world was not greater than 8,000. In the second edition of his classic *Species Plantarum*, published in 1763, he described 7,540 of them.

Exact knowledge and description of plant species is important, the speaker declared, if the applied plant sciences, such as agriculture, horticulture, forestry and pharmacology are to make progress. Of two plants that look almost alike yet are distinct species, one may be useful in breeding and the other useless, or one may be poisonous and the other harmless.

Of great importance, however, is the confident knowledge of the kind of plant you are dealing with when you are carrying on basic research in other plant sciences like genetics or physiology, leading eventually to an understanding of the mystery of photosynthesis and the origin of life.

USSR Starts Health Plan

➤ SOVIET MEDICAL and public-health authorities have a five-year plan for improvement of health conditions in the USSR that includes several bold pioneering ventures in the medical field. These were outlined before the American Philosophical Society by Prof. Stuart Mudd of the University of Pennsylvania medical school, recently returned from a month's visit in Russia, where he interviewed about 200 doctors and public health workers.

Among the programs which he saw in actual operation were preparation of bacteriophage for combating diarrhea in children, use of the Kluyeva-Roskin "solvent" treatment for cancer, and preparation of BGG anti-tuberculosis vaccine for use on babies throughout the USSR. Pushing forward in the classic researches on neuro-psychological problems started years ago by Pavlov, Russian neurologists and psychiatrists are making use of their results in the prevention and management of mental dis-

ease.

While the program as laid down is comprehensive, special attention is being paid to problems connected with the health of children and the physical and mental rehabilitation of war veterans. Basic research is also coming in for generous support.

Prof. Mudd declared in conclusion: "Good will exists between scientists of the two countries who have had the opportunity for personal acquaintance. It is my earnest belief that the good of both countries demands the future broadening of the basis of mutual understanding and good will."

Race Problems

➤ PROGRAMS for the abatement of race prejudices are often laid out with much enthusiasm and good will, but because their sponsors do not make use of known principles of psychology and the social sciences they work out the wrong way, declared Donald Young, executive director of the Social Science Research Council. A few social scientists working independently and two or three leading intergroup agencies have now begun scientific analysis of inter-



SHOOTING STAR—This meteor is one of the magnificent shower visible when the earth plowed through debris left by the Giacobini-Zinner comet on Oct. 9. The flash lasted only a few tenths of a second, as the meteor was speeding along at about 10 miles a second. The photograph was made with the four-inch Ross camera at the University of California by L. Salanave and S. Inglis.

racial problems.

The speaker warned against further unscientific efforts: "Continued failure to take full advantage of the potential contribution of the social sciences in developing and testing the necessary techniques is inexcusable in view of the urgency of the problem of developing more rational race relations and the tremendous expenditure of time and money in efforts directed towards its solution."

Research in America

➤ AMERICAN medicine remained "colonial" long after the Colonies had become a nation, Prof. Richard Harrison Shryock of the University of Pennsylvania stated before the meeting. That is, medical men depended on Europe for a proper finish to their training, and especially for fundamental research.

Prof. Shryock thinks this was partly due to a Victorian revulsion to "cutting dead people open" in autopsies, partly to "the indifference of a commercially-minded people to any science that did not possess immediate utility."

However, once late nineteenth-century researches demonstrated that the "pure science" of earlier decades was proving of practical value, younger American medical men turned to research with great enthusiasm. At the same time, there was a lot of quickly-made money waiting to be used, and some of this got used in support of research. Research was long delayed in this country, but when it got started it developed with a rush.

Americans Good Observers

➤ BY FAR the greatest part of the outstanding astronomical observations have been made in America, while many of the major theoretical advances have come from overseas, Dr. Henry Norris Russell of Princeton University told the meeting. But astronomers of many nations have cooperated so closely in expanding our knowledge of the universe that their contributions are hard to untangle, he said.

The temperature and composition of the sun and stars, the sources of their energy, the dimensions and rotation of the galaxy and the vast realm of external galaxies have been disclosed by looking through the great refractors and special instruments such as a tower telescope and interpreting these observations in the light of theoretical advances.

Science News Letter, October 26, 1946

MEDICINE

Organization to Help Victims of Nerve Disease

➤ THE VICTIMS of a baffling and crippling nerve disease, their relatives, friends and doctors have banded together in an attempt to find weapons for conquering the malady, multiple sclerosis.

With Dr. Tracy Putman of the Neurological Institute of New York as honorary chairman, the new organization, called the Association for Advancement of Research in Multiple Sclerosis, has its headquarters at the Academy of Medicine Building in New York.

The disease is believed to be more than twice as common as infantile paralysis, but no one knows the exact number of victims.

Double vision, involuntary quivering, difficulty in walking and balancing, speech difficulty, numbness of parts of the body and emotional upsets are among the symptoms which result from a patchy destruction of the nervous system. What causes the nerve destruction is not known though there are numerous theories.

The disease most often strikes young people between the ages of 20 and 40, frequently incapacitating them for life. No cure is yet known for it.

Science News Letter, October 26, 1946

Research Leads to New Link Between Cancer, Diet

➤ NEW EVIDENCE for a link between cancer and diet is reported by W. D. Salmon and D. H. Copeland of the Alabama Agricultural Experiment Station.

A diet that does not contain enough choline results, within eight to 16 months, in cancers occurring in a high percentage of laboratory rats, they find. The abnormal growths, both cancerous and precancerous, occurred principally in the lungs and liver.

In the experiment, dietary cancer in the livers of the animals was always found to follow cirrhosis of the liver. Cancer of the liver in people likewise follows cirrhosis in a high percentage of cases, the nutritionists point out in their report to the American Journal of Pathology.

Malignant tumors occurred in the livers of 30% of the rats receiving the low-choline diet. Primary cancers were found in the lungs of 38% of the animals. In 10% of the cases, malignant tumors de-

veloped under the skin or were imbedded in the muscular tissue. None of the control animals receiving the same diet as the others but with adequate amounts of choline developed cancer.

Choline is a relatively simple organic base, sometimes classed as a vitamin.

Of the many attempts to link cancer to diet, the work of the two Alabama nutritionists is believed to be the first in which cancer has been produced in experimental animals as a result of a specific dietary deficiency.

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While the population of *India* during the past 40 years has increased by about 100,000,000, the total area of land under cultivation has remained the same.

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