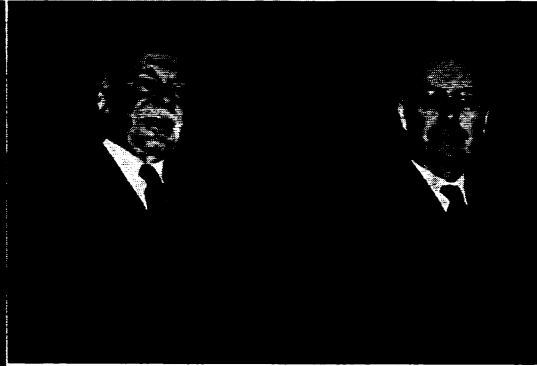


ACADEMICIANS

At the spring meetings of the National Academy of Sciences—Dr. Ross G. Harrison, chairman, National Research Council and trustee of Science Service (above). Entering the lobby (above, center) are Dr. Frank R. Lillie, president of the Academy, and Dr. John C. Merriam, of the Carnegie Institution of Washington.



PETITIONERS

Discussing a petition to President Roosevelt on the Spanish situation are (lower center) Dr. Harlow Shapley, Harvard College Observatory, Dr. Harold C. Urey, Columbia University, and Dr. F. R. Moulton, permanent secretary, AAAS. Listening intently (above) are Dr. R. A. Millikan, California Institute of Technology and Dr. Gano Dunn, of New York City.

tween the volcanoes and the molten interior Dr. Daly called by a new name, "abyssoliths," meaning bottomless stone. An abyssolith carries to the surface molten rock material, with steam and other gases under great pressure. These gases are the real explosives that supply motive power to volcanoes, he said. When the abyssolith's supply of them is spent the volcano "goes out."

The molten interior of the earth is of course not to be thought of as a liquid sloshing around like water in a jug. If it were at the surface, it might be liquid; the material is hot enough so that at least some of it would flow freely. But buried at great depths as it is, the molten interior mass is under such terrific pressure that it is held to a steely rigidity. In terms of the surface the interior can be stated only as a paradox: molten, yet stiff.

Electrical Rivers

Vast electrical rivers several hundred miles wide flow through the thin atmosphere between 60 and 90 miles above the earth in the polar regions, Dr. A. G. McNish of the Carnegie Institution of Washington stated. He has recently conducted a study of these currents by means of a new method of mathematical analysis.

The currents flow westward along the auroral zone, a belt about 1,500 miles

from the North and South Poles. They appear during magnetic storms and are attributed to the action of particles projected through space from the sun. These particles also give rise to the auroral displays. During the most intense magnetic storms the auroral zone shifts to lower latitudes and the currents flow in more southerly regions.

This accounts for the interruption of radio and wired communications during several severe magnetic storms that occurred last year, Dr. McNish explained.

Science News Letter, May 7, 1938

PHYSICS

Cosmic Rays Operate Radioteletypewriter

COSMIC rays and ultra short radio waves were combined to operate a radioteletypewriter in a novel exhibit in Rochester, N. Y.

Speeding across interstellar space from the most distant galaxy, the cosmic rays register their passage on a Geiger-Mueller counter, which in turn operates a relay to supply an initiating impulse to operate a radiotype. The radiotype machine receives news bulletins distributed by one of the major news services. The exhibit is sponsored by the International Business Machines Corporation, one of whose electric typewriters is included in the radiotype circuit.

Science News Letter, May 7, 1938

GENERAL SCIENCE

Harrison, Murphy, Riegel Science Service Trustees

THREE new trustees of Science Service, the institution for the popularization of science, were elected at its annual meetings in Washington.

Dr. Ross G. Harrison, chairman of the National Research Council, will become one of the representatives of that organization on Science Service's governing body. Dr. Harrison is director of the Osborn Zoological Laboratory at Yale University.

O. W. Riegel, director of the Lee School of Journalism at Washington and Lee University, was named one of the trustees representing the newspaper profession. J. Edwin Murphy, managing editor of the Baltimore Evening Sun, is the third new trustee. He also represents journalism.

Science Service, established by the late E. W. Scripps, newspaper publisher and philanthropist, to bring before the public authoritative accounts of the achievements of science, is governed by a board of trustees containing 15 members, representing scientific organizations, the Scripps estate and the newspaper world.

Dr. Robert Andrews Millikan, California Institute of Technology Nobel

Prize winner, was reelected as a trustee to succeed himself as a representative of the National Academy of Sciences on Science Service's board. Dr. Henry B. Ward of the University of Illinois was likewise re-elected a trustee. He represents the American Association for the Advancement of Science.

Science Service's other trustees include Dr. Harlow Shapley, Harvard College Observatory; Dr. W. H. Howell, Johns Hopkins University; Dr. E. G.

Conklin, Princeton University; Dr. J. McKeen Cattell, editor of Science; Dr. C. G. Abbot, Smithsonian Institution; Dr. H. E. Howe, editor of Industrial and Engineering Chemistry; Dr. Warren S. Thompson, Scripps Foundation for Research in Population Problems; H. L. Smithton, E. W. Scripps Estate, and Dr. John H. Finley, editor of the New York Times. The position on the board occupied by the late Robert Paine Scripps is being left vacant this year.

Science News Letter, May 7, 1938

GENERAL SCIENCE

Scientists' Plea Is Move To Save World From Fascism

MUCH deeper significance than aid to Spanish democracy is behind a letter which 18 of America's scientists have sent to President Roosevelt.

Vital concern about the inroads that fascism and dictatorship are making upon freedom in science and other fields motivated the plea to the President that he lift the Spanish arms embargo.

These leading scientists feel that by giving support to democracy in other lands, they are acting to preserve in America "that democratic tradition which has allowed science to advance." They believe that continuance of the embargo against the Spanish government jeopardizes the peace of the United States "by encouraging fascist nations to proceed with their use of war as an instrument of national policy."

If the military power of Italian and German invaders engulfs Spain, then France as one of the few surviving democracies will be endangered. So they fear. Therefore, they feel that giving the Spanish republic an opportunity to defend itself is "a great service both for science and for democracy."

Scientists in the aggregate have not often been articulate about such questions. In the past, even during world wars, scientific work has been relatively unhampered by political affairs. Today in fascist countries it is very different.

A trio that includes two Nobel prize winners and a leading astronomer formulated the letter which was then signed by 15 other scientists, all members of the National Academy of Sciences.

Dr. Harold C. Urey, Nobelist and professor of chemistry at Columbia University, Dr. Arthur H. Compton, Nobelist and professor of physics at the Univer-

sity of Chicago, and Dr. Harlow Shapley, director of the Harvard Observatory, worked together in framing the letter to the President.

Others who signed the letter were:

Dr. Roger Adams, University of Illinois chemist; Dr. J. McKeen Cattell, psychologist and editor of *Science*, New York; Dr. Arthur B. Coble, University of Illinois mathematician; Dr. Edwin G. Conklin, Princeton biologist; Dr. Charles A. Kraus, Brown University chemist; Dr. S. Lefschetz, Princeton University mathematician; Dr. S. A. Mitchell, University of Virginia astronomer; Dr. F. R. Moulton, astronomer and permanent secretary of the American Association for the Advancement of Science; Dr. Robert S. Mulliken, University of Chicago physicist; Dr. George Howard Parker, Harvard zoologist; Dr. F. K. Richtmyer, physicist, and Dean, Cornell University's Graduate School; Dr. J. F. Ritt, Columbia University mathematician; Dr. Edmund W. Sinnott, Columbia University botanist; Dr. Oswald Veblen, professor of mathematics, Institute for Advanced Study, Princeton; Dr. Sewall Wright, University of Chicago zoologist.

Dr. Walter B. Cannon, the Harvard physiologist, has been active in raising medical aid for the Spanish republican cause. In England, Dr. J. B. S. Haldane, the biologist, has worked for the Spanish loyalists and makes numerous trips to Spain in this connection. Prof. A. V. Hill, British physiologist and Nobelist, is also outspoken against fascism. The leading British scientific journal, *Nature*, has repeatedly published articles and letters critical of the fate of science and scientists in the dictator countries. On several occasions it has come under Nazi bans.

Science News Letter, May 7, 1938

MEDICINE

Thyroid Hormone in Ear Improves Hearing of Some

THE MIRACLE of making the deaf hear has been at least partially wrought by injections into the ear of thyroxine, hormone secreted by the thyroid gland. Results of this method of treatment were reported by Dr. Max A. Goldstein of St. Louis, Mo., at the meeting of the American Laryngological, Rhinological and Otological Society.

The patients, 35 of them, were suffering from the chronic hereditary type of deafness known as otosclerosis. In this condition spongy bone forms in the capsule of the labyrinth of the ear. Dr. Goldstein injected the thyroxine into the middle ear.

Careful tests of the hearing were made with the audiometer before and after the treatment. Improvement in hearing after treatment ranged from 35 per cent. to 50 per cent. In other words, while not cured completely of deafness, these patients recovered from one-third to one-half of their hearing.

Science News Letter, May 7, 1938

BACTERIOLOGY

New Virus Causing Pus Discovered in Rats

SOMETHING new in viruses is a virus that causes abscesses and pus formation in tissues under the skin. These conditions have hitherto been attributed to bacteria alone. A pus-forming, abscess-causing virus has nevertheless been discovered in rats. The discovery, made in the course of cancer investigations, is reported by Drs. William H. Woglom and Joel Warren of the Institute of Cancer Research and College of Physicians and Surgeons, Columbia University. (*Science*, April 22).

Science News Letter, May 7, 1938

PHYSICS—CHEMISTRY

Durand, Kraus, Honored With Franklin Medal

DR. WILLIAM F. Durand, professor emeritus of mechanical engineering at Stanford University, and Prof. Charles A. Kraus of Brown University will receive the Franklin Medal of the Franklin Institute for distinguished work in physical science.

The medals will be awarded May 20 as part of the dedication exercises for the Institute's heroic statue of Benjamin Franklin.

Science News Letter, May 7, 1938