

News of Science

Element 102

A joint research effort by scientists from the United States, Great Britain, and Sweden has led to the discovery of element 102. The international research team included investigators from the chemistry division of the U.S. Atomic Energy Commission's Argonne National Laboratory at Lemont, Ill., the chemistry division of the United Kingdom's Atomic Energy Research Establishment at Harwell, and the Nobel Institute for Physics in Stockholm, Sweden.

The new element was produced by bombarding curium, which is element 96, with carbon ions accelerated in the cyclotron at the Nobel Institute. The scientists who took part in the experiment, the first to lead to the discovery of an artificially created element by an international research team, are as follows:

From Argonne, Paul R. Fields, a group leader in the chemistry division, and Arnold M. Friedman, who is working at Harwell for 1 year under an exchange of U.S. and British nuclear scientists;

From Harwell, John Milsted, a chemist who last year conducted research at Argonne under the U.S.-U.K. exchange program and helped separate the curium used in the bombardments; and Alan Beadle, a chemist;

From the Nobel Institute for Physics, Hugo Atterling, physicist; Wilhelm Forsling and Lennart Holm, chemists; and Bjorne Astrom, physicist.

The United States, through the Argonne National Laboratory, provided the very rare isotopes of curium used in the experiments. The curium was shipped to Harwell, where Friedman, Milsted, and Beadle prepared the targets for the experiments. Harwell provided a rare isotope of carbon, carbon-13, which was used as the bombarding particle. The Nobel Institute provided the cyclotron, some special equipment, and a staff of physicists, chemists, and technicians. The cooperation with Nobel Institute was started because the cyclotron at the institute could provide the intense source of high-energy carbon-13 ions that were necessary for the experiment.

The three-nation group began experiments in the cyclotron in March. First

indications that the new element had been discovered were found a few days later. The group performed another series of experiments in April which confirmed the original findings. Similar experiments have just been concluded confirming again the original discovery. This isotope of element 102, thought to have an atomic mass number of 253, is very unstable, having a half-life of 10 to 12 minutes and emitting alpha particles.

Lysenko in Favor?

Trofim D. Lysenko, controversial Soviet geneticist, is apparently again to hold a significant place in Soviet science. This is indicated by the fact that on 17 July an extensive interview with Lysenko was given a prominent position in *Pravda*, leading newspaper in the U.S.S.R. The report indicated that Lysenko had been asked by the current regime to aid his country's program to increase per capita production of meat, milk, and butter. In the *Pravda* interview, which dealt particularly with milk production, Lysenko again put forward his now almost historic anti-Mendelian thesis that acquired characteristics can be inherited.

After pointing out that large calves are a serious problem to the dairy industry, he presented his solution. Cows of high milk productivity should be bred to bulls of a smaller strain such as Jerseys, that are noted for providing high butter-fat content. By feeding an especially enriched diet during gestation, he claimed that it would be possible to produce calves which would grow to a smaller size when mature, but which would give an increased quantity of milk. Lysenko maintained that these desirable characteristics would be inherited.

During the Stalin era, Lysenko was a dominant figure. He became head of the Academy of Agricultural Sciences in 1938, a post from which he was forced to resign in 1956. After Stalin's death many of Lysenko's scientific opponents regained their positions. Some of them openly criticized him, and several Soviet journals carried articles disputing his theories of stimulating changes in plant life that then would become hereditary.

Universities in Turkey and Vietnam

Two new universities are to be set up shortly in Turkey and Vietnam. Ataturk University, to be established at Erzerum in the eastern part of Turkey, will be the country's fifth university. It will specialize chiefly in the teaching of the agricultural sciences, but will also have faculties of law, economics, and medicine.

In Vietnam, the country's ancient capital, Hue, has been chosen as the site of the new university, which will open at the beginning of the next academic year. Courses will include philosophy, modern languages, law, pedagogy, physics, chemistry, and biology.

Shark Fossil

The Chicago Museum of Natural History has announced discovery of a fossil shark that is 250 million years old. The museum reports that the fossil was found in shale formations in Parke County, Ind., several weeks ago by Rainer Zangerl and Eugene S. Richardson, Jr.

This is believed to be the first well-preserved shark fossil ever found from the Carboniferous period. The remains of the shark measure 8½ feet in length, and it is estimated that they would have been about 15 feet long had they been complete. Because sharks have cartilaginous skeletons, they are rarely preserved as fossils.

News Briefs

The *Effects of Nuclear Weapons*, a 579-page handbook that provides latest knowledge of weapons effects, has been published by the U.S. Atomic Energy Commission. It is on sale for \$2 a copy by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

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Electronic Associates, Inc., Long Branch, N.J., has announced the opening of its European Computation Center in Brussels, Belgium. This center is one of the first commercial facilities of its kind to be placed at the service of European industry and technological research.

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Two century-old firms, W. R. Grace and Company of New York and Pechiney, French chemical and metallurgical concern, have announced the formation of a new company in the United States to produce high-purity elemental silicon and other semiconductors. Location of the plant has not yet been made public, but it is expected to be in operation within a year.