advice, although knowing that the problem would probably be dissected in such a manner that perhaps nothing would be left of it. In his lectures, Mark Adams exhibited an unusual gift for developing a scientific theme and for bringing continuity and clarity to a subject of the most complex structure. Above all, his enthusiasm for the critical analysis of the scientific problem, which he tried in vain to restrain, was transmitted to the audience, and he could carry his listeners along through foreign territories. If there was evidence that was inadequate, or if there was a flaw in the reasoning, or if there was perhaps a little wishful thinking, it would never escape his notice.

It was not surprising that these particular talents should be called upon by an invitation to join the Editorial Board of *Science* in 1953. Among his many editorial contributions, his book reviews were outstanding. They embraced subject matter as far apart as chemistry, enzymology, infectious diseases, and Roman history. They all bear the mark of his incisive thinking and his uncompromising attitude toward loose talk. This uncompromising attitude was the same whether he was confronted by a book or by experimental data of his friends and students or his own. Perhaps sometimes his criticism was ill received by some who did not grasp the spirit in which it was given. Having shared a laboratory with Mark Adams for 8 years, I may perhaps qualify as a key witness in testimony of his critical abilities which spared no time or effort to unveil the precise and relevant facts. That it did not mar the relationship to his friends and students was merely due to the fact that he did not successfully hide from them his gentle kindness, warm affection, and selfless interest in their mental and personal development.

Those who knew Mark Adams only as a quiet and rather shy person, or those who knew him only as a sharp critic, may have been surprised to see him perform as master of ceremonies at a Christmas party or at the yearly farewell party at the end of the phage course. His imagination, powers of observation, and sense of humor came to the surface at these occasions and filled many joyful evenings.

Mark Adams had several avocations. They were pursued with the same thoroughness and perfectionism as his scientific endeavors. Together with his wife, he studied ornithology and archeology, he was interested in photography and enjoyed sailing. During one summer in Woods Hole he became interested in oil painting. He began by watching a friend paint for several days. After absorbing all the essentials of the procedure, he set out on his own. His second effort, a portrait of a fellow-scientist, was so accomplished and so original that even the model appreciated the painting and was anxious to acquire it.

In Mark Adams we have lost one of our most critical and courageous minds. We miss a brilliant teacher who was capable of transmitting the vibrations of his own enthusiasm. An investigator has left us who did not care how far the road he was building would stretch; who was more concerned that the road could be used by others too. And many of us have lost a teacher and friend whose unostentatious gentleness and warmth will remain in our memory, together with the image of a man utterly and uncompromisingly devoted to scientific truth.

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News of Science

Westinghouse Talent Search

High-school science students from 41 states and the District of Columbia have been selected as winners of 260 honorable mention awards in the 16th annual Science Talent Search. The 205 boys and 55 girls were chosen from a total of 3122 graduating seniors who represented schools in all 48 states and Washington, D.C.

Like the 40 winners named earlier who are competing this month for the Westinghouse science scholarships, all of those who receive honorable mention will be recommended to colleges and universities for scholarships. Selection of the 40 winners and 260 honorable mentions was based on the students' scholastic records and teacher recommendations, their science projects, and their standing in a science aptitude examination.

First place among states producing honorable mention winners this year is again New York with 58, 40 boys and 18 girls. California and Illinois rank second with 19, 18 boys and one girl in the former and all boys in the latter. Third place goes to Pennsylvania with 16 winners, 13 boys and three girls. Ohio's 12 winners, ten boys and two girls, give that state fourth place. Massachusetts is fifth with 11 honorable mentions, seven boys and four girls.

All of the honorable mention recipients have excellent scholastic records, and the judges have reported that they rank close behind the 40 winners who will compete for top national honors in Washington, 7–11 Mar., during the annual Science Talent Institute. One hundred four of them—77 boys and 27 girls—rank first, second, or third in their classes.

Fifty-seven of the boys and four of the girls selected for honorable mention have named physics as their first choice for future careers. Fifty boys and one girl hope to find careers as engineers, and 39 in the group favor some branch of chemistry. A total of 34, including 11 girls, prefer medicine. Nine girls hope to be teachers. One boy chose the ministry and one girl the writing profession.

The Science Talent Search is conducted by Science Clubs of America through Science Service. The Westinghouse Educational Foundation, supported by the Westinghouse Electric Corporation, provides the awards and makes the Science Talent Search financially possible.

Army's Solar Furnace

The Department of the Army has announced that a large solar furnace capable of concentrating the sun's rays to produce temperatures comparable to those generated by an atomic explosion will be erected at the Quartermaster Research and Engineering Center, Natick, Mass. The furnace will have an energy equivalent of approximately 28 kilowatts.

The facility will be utilized for laboratory testing of materials intended for the protection of military personnel against the thermal effects of nuclear and other weapons. Standard sources of intense heat, such as high-current electric arcs,

gas-fired panels, burning magnesium, and incandescent lamps, are not adequate because they are not hot enough, do not uniformly cover a sufficiently wide area, and are not easily controlled. While reliance will be placed on atomic field trials for final testing of materials against thermal effects, the solar furnace is expected to reduce the time and cost of developing heat-resisting materials.

The installation consists of four principal elements: heliostat, concentrating mirror array, attenuator, and test chamber, which will occupy an area that will be about 125 feet in length by 40 feet in width. At one end of the assembly is the heliostat, a flat mirror 40 by 36 feet, which receives the sun's rays and reflects them a distance of 96 feet upon the concentrating mirror array at the other end of the assembly. An automatic positioning system drives the heliostat and keeps it constantly at the correct angle with the sun. Thus, the directly reflected rays will always illuminate the concentrator, regardless of the time of the day, month, or year.

The concentrating array consists of 180 curved surface mirrors, each 23.5 inches in diameter, which reflect the rays back in the direction of the heliostat, but concentrate them within the target or test chamber, which stands between the heliostat and the concentrating mirror array. Before reaching the target chamber, the concentrated rays pass through the attenuator, a venetion-blind type of shutter which can reduce the intensity of the light when desired.

Finally the sun's rays are focused within the test chamber in a 4-inch diameter beam, representing the concentrated energy reflected from the surface of the heliostat and the concentrating mirror. It is within this concentrated beam that the articles that are to be tested will be exposed. The measuring apparatus, shutters, controls, and laboratory facilities are housed in the test chamber, which is reached by a small elevator platform. Ground for construction of the solar furnace was recently broken and it is expected that the installation will be completed and ready for operation by summer of this year.

Geology for College Teachers

The department of geology at the University of Illinois has announced the first summer institute in geology for college geology teachers to be held at Urbana, from 17 June to 10 Aug. The institute, which will be on "Geologic frontiers: recent concepts and methods in mineralogy and geochemistry, and their application to geology," is supported by the National Science Foundation.

The institute will be conducted by D. M. Henderson and A. F. Hagner of the University of Illinois, and R. M. Garrels of Harvard University, with the assistance of approximately 15 distinguished scientists from throughout the nation. For information and application blanks write to one of the codirectors, D. M. Henderson or A. F. Hagner, Department of Geology, University of Illinois, Urbana, Ill. Applications should be filed *by 1 Apr.*

U.K. Institute for Nuclear Science

The British Government is to set up a national institute for research in nuclear science. Enoch Powell, Financial Secretary to the Treasury, has reported to the House of Commons that the main object of the institute would be the provision of facilities and equipment for research in the nuclear field. He emphasized that the institute would not take over the research now being done in universities with assistance from government funds. Nor will it affect British participation in the international project for common facilities in Geneva. In the government's view, Powell stated, the institute will fill a gap that would otherwise exist in British ability to keep in the forefront of nuclear progress.

Excerpta Medica and Soviet Medicine

As a result of plans initiated by the Public Health Service, National Institutes of Health, U.S. Department of Health, Education, and Welfare, arrangements have recently been completed with the Excerpta Medica Foundation, New York, under which for the first time an extensive review of the Soviet medical literature in all areas of medicine will now be available in the United States. The plan calls for the translation and publication of abstracts of the Soviet medical literature, including reports of work now being done in various cities throughout the U.S.S.R.

The abstracts will be prepared by Soviet specialists, the material being edited and supervised by a permanent editorial committee of 30 Soviet scientists appointed by the Excerpta Medica Foundation in cooperation with the Presidium of the Academy of Medical Sciences of the U.S.S.R. These abstracts will be supplemented by verbatim translations of abstracts of the Soviet literature in specially selected fields. The abstracts will be published under the title *Abstracts of Soviet Medicine* and will appear throughout 1957 as two separate publications: part A, *Basic Medical Sciences,* and part B, *Clinical Medicine,* totaling together some 1300–1400 pages.

U.S. Marriages

Marriages in the United States increased last year, reaching an estimated total of about 1,587,000, compared with 1,542,000 in 1955 and 1,491,000 in 1954, according to Metropolitan Life Insurance Company's statisticians. The rate of marriages was 9.4 per 1000 population (including the Armed Forces overseas), compared with the postwar low of 9.2 per 1000 in 1954.

Most states recorded small increases in marriages, but in two states, Indiana and Oklahoma, there was a pronounced upswing—almost 17 percent in Indiana, and about 11 percent in Oklahoma. The statisticians predict that the annual increase is likely to be small for the balance of this decade, but that after the early 1960's the number of marriages should rise rapidly as the large number of persons born after World War II come of age.

Applications from High Schools Solicited for Traveling Library

The Traveling High School Science Library Program, supported by a grant from the National Science Foundation and administered by the AAAS, is now making plans for the academic year 1957–58. A description of the 1956–57 program and a list of the 200 books in the traveling libraries presently serving 104 senior high schools have been published [*Science* **124,** 1013 (23 Nov. 1956); *Sci. Monthly* **83,** 300 (Dec. 1956)].

During 1957–58 it is hoped that the program will be extended to approximately 300 senior high schools which will receive 50 books at a time in traveling cases. Each school will exchange books with other program schools at intervals of 2 months, so that every school will have had an opportunity to use all 200 books in the traveling library during the year.

The program is intended to increase the interest of high-school students in science, to encourage the choice of careers in science, and to broaden the science and mathematics background of high-school teachers. The program also serves to stimulate the acquisition of well-chosen science books for school and public libraries.

The greatest apparent need for this program is in small and medium-sized high schools in nonmetropolitan localities that lack good community library facilities. The following general criteria will guide the selection of about 300 program schools for next year: (i) the school should have an enrollment of at least 150 but not more than 750 students in the 10th to 12th grades, inclusive; (ii)