

and fellowships in the social sciences and humanities as well as in the medical and natural sciences.

It is our considered opinion that Bill S. 1285, which was introduced by Senator Warren G. Magnuson and is based on the report, "Science: The Endless Frontier," made to President Truman by Dr. Vannevar Bush, conforms far more closely to the requirements stated above than does Bill S. 1297, which was introduced by Senator Harley M. Kilgore, and we urge that you recommend passage of the Magnuson Bill S. 1285 (Committee Print of October 12, 1945), in order to achieve the maximum benefit from scientific research for all of the people.

Yours very truly,

(This letter was signed by 84 members of the California Institute of Technology Weekly Seminar.)

C. I. T. NEWS

NOVEMBER ALUMNI MEETING

THE November meeting of the Alumni Association was held at the Kaiser Steel Plant at Fontana, Calif., on November 15, 1945.

Interest in the plant and in association activities was adequately demonstrated by requests for reservations from 350 C.I.T. alumni in the Los Angeles-Pasadena area.

The meeting, which had been arranged by Donald R. Warren of the Donald R. Warren Company, a Tech alumnus, assembled for dinner in the Kaiser Plant cafeteria. After the dinner, Chuck Varney, president of the Association, introduced M. W. Sahlberg of the Warren Company. Mr. Sahlberg related the story of the construction of the plant, portions of which were designed by the Warren Company. In an amazingly short time what had been raw land became a fully integrated unit capable of transforming the ore from the Vulcan Mine at Kelso, in San Bernardino County, Calif., and from Utah to finished steel products.

Construction started in March, 1943, and nine months later the blast furnace began to deliver the metal which has gone into the hulls of hundreds of ships needed for victory, as well as into countless other war materials. Mr. Sahlberg told of the important part in the structural design and engineering which had been played by Jim Fox, chief engineer of the Warren Company and a C.I.T. graduate of the class of 1936.

The members of the Kaiser Steel Company who were to act as guides and hosts for the inspection tour were then introduced. They were:

Thomas M. Hart, assistant general superintendent
W. A. Vogt, plant engineer
Thaddius Kay, assistant plant engineer
Wright M. Price, material and cost engineer
Franklin C. Frye, special combustion engineer
Nathan Hittelman, project engineer
Warren Hubbard, Sr., project engineer
Lynn Jones, electrical engineer
Harry Riegel, superintendent of utilities

Itinerary of the trip included the coke ovens, capable of processing 1728 tons of coal per day; the blast furnace, with 1200 tons capacity; the five stationary and one tilting type open hearth furnaces, of 185-ton capacity each; and the plate and structural mills and merchant mill. The plate mill is designed to roll plates

from three-sixteenths inch to one inch in thickness and up to 92 inches in width. The structural mill—rated at 70 tons per hour—produces I-beams, channels, angles, blooms and billets. The merchant mill produces light structural sections, rounds and squares and reinforcing bars. Stops were also made at the power plant, the soaking pits, and the ore and coal storage structures. The trip afforded spectacular views of the tapping of the blast furnace and the unloading of the coke ovens as well as a splendid opportunity to see the scope of the whole process of steel making.

The Alumni Association wishes to express its appreciation to the Kaiser Company and the Donald R. Warren Company for making the trip possible.

SEMINARS REVIEW CURRENT EVENTS

MEMBERS of the faculty of C.I.T., of the staffs of the Huntington Library and Mt. Wilson Observatory are meeting in weekly seminars at Caltech to discuss the relations of science and technology to society and government.

Attendants at the seminars, which have been held throughout October and November, have heard reports from Dr. C. C. Lauritsen and Dr. Paul Epstein on the necessity of arriving at a method of control of the atomic bomb, a discussion by Dr. Linus Pauling of two bills before the Congress proposing federal financial aid to science, reports from Professor Horace Gilbert on the effects of concentrated British-U. S. bombing of German industry, and an eye-witness account from Commander J. T. Hayward of the damage done at Nagasaki and Hiroshima by the atomic bomb. At the seminar of November 27, Dr. Edwin F. Gay reported on the work being done in the social sciences and the funds being expended for projects and investigations in the field of the humanities.

Out of these seminars have come two newsworthy documents; first, the open letter to the President of the United States, setting forth the belief of the members of the seminar that control of the atomic bomb and atomic development must be established at any cost on first a national and then on an international basis. The complete text of this letter was carried in the November issue of *Engineering and Science*.

Following the letter on the atomic bomb, and indirectly related to the same subject, a second document, addressed to the members of the Senate committees on commerce and on military affairs, stated the group's majority conclusions on the subject of federal aid to science. This letter appears in connection with Dr. Linus Pauling's editorial in the "Month in Focus." The reports by Professor Gilbert and Commander Hayward on the effects of bombing against Germany and Japan brought to light many startling facts, and as this information is released by the government, *Engineering and Science* will relay reports to its readers.

THOMAS HUNT MORGAN

DR. THOMAS HUNT MORGAN, 79, one of the world's foremost authorities on heredity and 1933 Nobel Prize winner, died December 4 at Huntington Memorial Hospital, Pasadena, after a brief illness.

Professor emeritus of biology at the California Institute of Technology, to which he came in 1928 as a leader of research in at least five fields and as president of the National Academy of Sciences, Dr. Morgan won the \$40,000 Nobel Prize in medicine for his investigations concerning the eugenic function of the chromosomes.

It was the first time the prize in medicine had been awarded to anyone who was not a physician. The award came as the result of 17 years' study of tiny vinegar flies—known as *Drosophila melanogaster*—which clarified the laws of heredity and of the mutation of species. Among other honors which came to the renowned biologist, who also was president of the American Association for the Advancement of Science in 1929-30, were the award of the Copely Medal by the Royal Society of London, investiture with the Insignia of Academician in the Pontifical Academy of Science in behalf of Pope Pius XI, and the Copernican citation.

Institutions which conferred honorary degrees on Dr. Morgan included Johns Hopkins, Harvard and McGill universities; the universities of California, Edinburgh, Michigan, and Paris, and his own University of Kentucky, from which he graduated in 1886. He won his master's degree there two years later and his Ph.D. at Johns Hopkins in 1890.

The genes which Dr. Morgan studied to evolve the findings which won him world-wide recognition are the guiding units determining formation of characteristics in animal, plant, and human life. Chromosomes are the larger units in which the genes are found. Because the vinegar flies multiply 800 times as fast as man, they afforded Dr. Morgan an opportunity for rapid cross-breeding in the laboratory, where they were subjected to many experiments, including X-ray bombardment. The genes are so small that they are invisible under ordinary magnification but the result of their action was apparent through physical changes in flies to the scientist whom many considered the "20th century Mendel."

Dr. Morgan, who recently retired from the Executive Council of the California Institute of Technology, was also a member of the American Society of Naturalists, the American Society of Zoologists, the Society of Experimental Biology and Medicine, the New York Academy of Sciences, the French Academy of Sciences, and the Royal Society of London.

Under his direction the William G. Kerckhoff Laboratories of Biological Science at Caltech became known as one of the world's most distinguished scientific organizations.

Dr. Morgan leaves his widow, Mrs. Lillian Simpson Morgan, of 1149 San Pasqual Street, Pasadena; a son, Howard K., airline executive of Kansas City; and three daughters, Mrs. Edith S. Whitaker of Palo Alto; Mrs. Lillian V. Sherp of Rochester, N. Y.; and Miss Isabel Merrick Morgan of Baltimore, Md.

DR. J. E. BELL RETIRES

Dr. James Edgar Bell, professor of chemistry at the Institute, retired in June, 1945. For many years chairman of the Freshman Registration Committee, Dr. Bell made a policy of knowing each member of the freshman class. His personal interest in Caltech men made his Sunday evening "at homes" events in which many freshmen participated during their first year at the Institute.

Dr. Bell's activity in recruiting able men for the study of science at C.I.T. was comparable to Bernie Bierman's effort to encourage outstanding football players to enter Minnesota. At every opportunity Dr. Bell appeared before the senior classes of California high schools, and his ability to open to his audience the vistas and challenges of engineering and science undoubtedly marked

the turning point in the choice of a career for many a student.

Dr. Bell received his S.B. at the University of Chicago in 1905 and his Ph.D. at the University of Illinois in 1913. He joined the staff of C.I.T. as associate professor of chemistry in 1916 and became professor of chemistry in 1918. He was active in the social life of the C.I.T. faculty and it was his pleasure to see that any new graduate student was made to feel at home at faculty functions.

At present Dr. Bell is teaching chemistry at Rollins College in Florida, where he continues to concentrate on his special interest, the development of men of science.

ATHLETICS

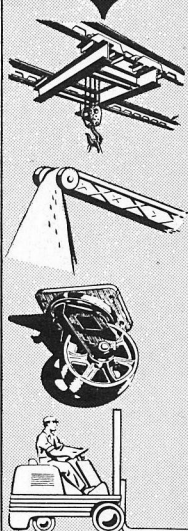
By H. Z. MUSSELMAN,
Director of Physical Education

IN THE opening Conference basketball game, Caltech nosed out the strong Whittier Poets 30-29 in a thrilling contest. Tech held a 21-17 half-time margin, but the Poets scored two quick baskets in the second half to tie the score. Throughout the half the Engineers never had better than a tie, and with two minutes to go, the Quakers held a three-point advantage. However, quick baskets by Elmore Brolin, guard, and Vincent Nurre, forward, swept the team to victory in the final 30 seconds.

At present, Coach Carl Shy is carrying only 10 men on the squad. The starting line-up consists of Jerry Schneider and Dick Jackson forwards, Paul Saltman center, Stuart Bates (captain) and Elmore Brolin guards. The second-string lines up with Don Root and Vincent

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Nurre forwards, Art Bruington center, and Dennis Ahern and Andy Tudor guards. Bates, Schneider and Ahern are lettermen, while Brolin and Nurre played on last year's "B" team. Two freshmen, Saltman and Bruington, are the only civilians on the squad. Several other men, who are being left on the "B" squad to gain game experience, will be brought up in a few weeks.

The team is tall (all the starting men are six feet) but not too fast. However, there is a decided absence of consistent scorers, and the team will sorely miss the threats which featured the Tech teams for the past five years. With scoring at a premium, Coach Shy is stressing tight guarding, and a deliberate and ball-controlling type of game with set plays. This should result in lower scores than Tech teams have been noted for.

Little is known of the strength of the other Conference teams, but all have favorable records in preseason practice games. With all teams decidedly strengthened by the return of many war veterans, the championship race appears to be wide open.

The classy water polo team, coached by Bob Merrick '42, is off to a fine start, with victories over both Inglewood High and U. C. L. A. by identical scores, 10-7. Additional contests will be played within the next few weeks with U. S. C., U. C. L. A., Fullerton J. C., and Whittier High.

COMING SOCIAL EVENTS

The Annual Dinner-Dance will be held at the Oakmont Country Club in Glendale on February 2. Kay Kalie and his band will provide the music for the evening.

Dinner will be at 8:00 P. M.—\$3.80 per couple

Dance will be at 9:30 P. M.— 2.70 per couple

Dinner and Dance— 6.50 per couple

This is also to announce that the date of the June banquet is tentatively set for June 21. Members of the alumni who have some distance to travel may wish to arrange their vacations accordingly.

INDUSTRIAL RELATIONS MEETINGS ANNOUNCED

The Industrial Relations Section of the California Institute of Technology announces the following dinner-discussion meetings for the current season. Attendance at these meetings is limited to representatives of the sponsors of the activities of the Industrial Relations Section and is by invitation.

Date	Subject	Speaker
Dec. 10, 1945	"The Economic Effects of Labor Policy"	Professor Leo Wolman, Columbia University, National Bureau of Economic Research
Feb. 20, 1946	"Collective Bargaining of Professional Employees"	Professor Waldo E. Fisher, Wharton School of Finance and Commerce, University of Pennsylvania
April 4, 1946	"Executive Practices in the Field of Human Resources"	Lawrence A. Appley, Vice-president, Vick Chemical Company

C.I.T. ENROLLMENT

Military students continue to predominate enrollment at California Institute of Technology, as shown by registration for the current semester which began October 31, 1945.

From a total enrollment of 921, which approximates former peacetime numbers, undergraduate students numbered 619 and postgraduates 254, according to L. W. Jones, registrar.

Of the undergraduates, 125 were Navy V-12 seniors and 241 Navy V-5 freshmen. Civilian student registration showed: freshmen, 137; sophomores, 55; juniors, 29; and seniors, 32.

Included in civilian enrollment were 110 veterans of World War II—undergraduates, 75; graduates, 35.

Among graduate students were 72 army and navy officers assigned to the Institute for special study in aeronautical engineering. Eight naval ordnance officers were also enrolled.

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