IN the House of Delegates of the American Medical Association during the Kansas City session in 1936, Dr. Harrison H. Shoulders, of Tennessee, submitted a resolution for the development of a plan whereby suitable recognition in the form of a medal or a testimonial might be given to fellows of the association who have rendered distinguished service in the science of medicine. In accordance with this action, a special committee, known as the Committee on Distinguished Service Awards, consisting of five members, was established. The first committee includes: Drs. H. H. Shoulders, Tennessee; J. W. Amesse, Colorado; J. D. Brook, Michigan; J. F. Hassig, Kansas, and Grant C. Madill, New York. This committee is authorized to receive nominations for the award, which is to be given on the basis of meritorious service in the art and science of medicine. It will include a distinguished service medal and a citation.

DISCUSSION

SCIENCE AT THE UNIVERSITY OF CHICAGO

THE masterful presentation of Professor E. G. Conklin in his "Science and Ethics"[1] of the disciplinary and educational value of science and its place in and contribution to world society as well as the future outlook for science in general deserves the commendation of men in all branches of this large and productive division. Professor Conklin's long and able service in the Biological Sciences in America peculiarly fits him to adequately present the outlook both from retrospect and prospect. No one acquainted with him would ever call into question the seriousness of his purpose nor the fairness with which he attempts to portray in this thesis his own firm convictions. With due respect and appreciation of his point of view there are a great many men active in science in this locality who regret exceedingly the implications and attitudes that will be left in the minds of many by the statement on page 600, "The President of The University of Chicago has recently called science a failure in the educational process and has urged a return to philosophy as the only sure road to sound discipline and true culture."

Without making any attempt to consider argumentatively the proper understanding of any particular type of verbal or written statement, for such argumentation has already received many pages of attention, and particularly in consideration of the old truth, "Actions count for much more than words," it is the purpose of this short communication to attempt to modify to some extent the impressions that will have remained after reading this particular sentence.

The writer has served as a member of the science faculty of the University of Chicago under four presidents. My impressions are that (a) never before in the history of the institution have as great a number or as great a percentage of students been exposed to methods and content of science as at present; (b) with the possible exception of the original organization and beginning of the university, under President Harper, there has probably never been a greater impetus toward strengthening the faculties in science with men of the highest caliber obtainable under the existing conditions; and (c) a larger portion of available funds of the university are now devoted to scientific investigation, especially to pure research in science, than ever before.

It is generally known that the University of Chicago has embarked upon an experimentation with the curriculum, especially in the college, and this movement has had the vigorous support of President Hutchins. With regard to its effects upon science in general, several things have happened, among which brief mention may be made of the following: (a) Whereas previous to the reorganization of the curriculum, involving removal of many courses but no more in science than other divisions, the number of students in the first two years being exposed to any study of zoology was of the order of 250 to 300 per year, whereas at the present moment this number will be of the order of 700 students. Practically 100 per cent. of all freshmen and sophomores in the University of Chicago, and whether major students in humanities, social sciences or natural sciences, take courses in both the biological and physical sciences. Previous to the introduction of the new plan, first- and second-year students actually exposed to the laboratory disciplines in zoology numbered approximately 150, whereas under the new plan the number is of the order of 300. (b) Under the old régime the majority of freshmen and sophomore students came directly under the influence of perhaps one or two major instructors, whereas at present the number of major instructors in the biological sciences alone is 14; to this there should be added that some 5 or 6 younger men, having attained their Ph.D. degree, constitute the major assistance, practically all of whom are productive scholars in science.

During the depression Herculean measures were adopted to maintain intact the faculty of the entire university, and in some respects departments in science fared better than some departments in other divisions. Although the salary for faculty members on a four-quarter appointment in the clinical depart-

[1] SCIENCE, 86: 595–603 (Friday, December 31, 1937).

ments and of administrative officers were reduced, no salaries of faculty members on regular academic appointments in the university were reduced. With some little measure in financial relief, immediate and strenuous measures were taken to repair any damage and to increase the effectiveness of the various departments. Within the last two years scores of men have been added to the faculties to strengthen all phases of university work, and science, rather than being neglected, has been tremendously stimulated by the addition to all ranks of the faculty from instructor to distinguished service professor (the science division being the one and only instance in which a man has been appointed from outside the university to a distinguished service professorship). The head of one science department, requesting of President Hutchins the appointment of one of three good men believed to be available, was told that if all three men were *good* to get the three of them. This was done, with their appointments having been made as of October 1, 1937.

With regard to support for scientific investigation there has been no evidence of a recession, and no case is known to the writer where research programs have been curtailed. It is well known that during the depression the most strenuous measures were taken to provide necessary equipment, personnel and other requirements. Investigation in all branches of science is on the upgrade rather than experiencing retrogression. Whatever impressions have been gained from outside the university, therefore, should be evaluated in terms of actual existing conditions. Science is going forward to a degree even greater than in previous periods, which precludes any immediate danger that it will be overthrown at the University of Chicago.

CARL R. MOORE

THE UNIVERSITY OF CHICAGO

EFFECTS OF FREEZES IN SOUTHERN CALIFORNIA ON SHADE AND ORNAMENTAL TREES

IN the August 22, 1913, issue of SCIENCE this writer presented some observations on the effects of a hard freeze in January of that year on certain shade and ornamental trees in Redlands and vicinity. In particular, mention was made of the effects upon the Pepper, the Acacias, the Grevilleas and several varieties of Eucalypti.

In January of 1937, Southern California was subjected to another period of freezing temperature, which, according to official weather reports, exceeded in severity any previous record. In Redlands, where these records were obtained, twenty-one days of the month of January experienced temperatures of freezing or below. Eleven days experienced a temperature of 26 degrees or below. The mean temperature of the month was recorded as 6 degrees lower than ever before experienced here.

The effect of the 1937 freeze upon the trees of this vicinity is, however, so very different from that of 1913 that a brief comparison may be of interest. The damage produced by the 1913 freeze was very great, both upon the ornamental and shade tree varieties mentioned above and upon the citrus trees as well. The damage produced by the 1937 freeze was negligible.

In 1913 hundreds of trees were killed outright. Due to injudicious haste in removal, hundreds of others that doubtless would have recovered if left alone, were sacrificed. As pointed out in the 1913 article the ability of many trees to recover, even though apparently every shred of live bark was killed and peeled off, was remarkable. In numerous instances the production of adventitious buds covering the trunk from ground to many feet above ground was one of the notable features of the recovery. Following the 1937 freeze very few trees showed a splitting of the bark. Entire defoliation in some varieties, especially the Peppers, did occur to a considerable extent. The defoliation was frequently attended with destruction of the tender twig growth and in some cases larger limbs were killed. In some varieties, especially the Eucalypti, the peculiar fuzzy growth due to the development of adventitious bud growth is evident, even though no bark peeled off. I have seen no exudation of gum such as was very common in 1913.

Any attempt to explain the difference in the effects of the two freezes is, of course, attended with a degree of uncertainty. It is to be noted, however, that in 1913 the cold came on suddenly, and was attended by a high, dry, north wind. The cold lasted about two days only, and was followed by warm, bright, sunshiny days. The mean temperature for 1913 was considerably above average. Very few of the citrus growers in 1913 were equipped with "smudge pots" or heating equipment, and no considerable smudge smoke accumulated. As soon as the sun rose, its heat began to have an effect, and increasingly so throughout the day.

In 1937 the cold increased gradually and was unaccompanied by wind. A very considerable portion of the citrus acreage in and around Redlands is now under heat, and "smudging" or heating is now much more general than in 1913. The smudge smoke accumulated like a dense pall over the entire area, and persisted pretty much during the entire daylight hours for a period of several days. At no time for a period of several days at a time did the temperature rise much above freezing. When it did warm up it did so gradually. Almost without exception the orange trees