

## MEMORIAL RESOLUTION

### FERNANDO SANFORD

(1856 – 1948)

On May 21st Stanford University lost one of the two survivors of its pioneer faculty in the death of Professor Fernando Sanford. Professor Sanford was born on a farm near Franklin Grove, Illinois, February 12, 1856. On attaining his degree of Bachelor of Science at Carthage College in 1879 he became Professor of Physical Science at Mr. Morris College, near Oregon, Illinois, where he taught until 1882. For the next four years he was Superintendent of Schools for Ogle County, Illinois. Then, with the ambition for greater understanding of science which characterized all his work he went to Germany and studied for two years with one of the outstanding physicists of the time, Von Helmholtz. Von Helmholtz regarded Sanford so highly as to urge him to remain in Berlin. Nevertheless, preferring to spread the message of science in his own country, which, in the 1880s was relatively unenlightened, Sanford came home. As Professor of Physical Science at Lake Forest University, he became so well known that Dr. Jordan chose him as a member of the group of only 22 men who came to Stanford as its pioneer faculty in 1891.

One of his first contributions to the new university was the organization of its Science Association, of which he was the first president. At the same time he took a leading part in the formulation of the Stanford entrance requirements, which were unusually liberal for those days, but which were adopted later in principle by most of our leading universities. Another innovation of his, now so common that it is hard for us to think of it as an innovation, was the laboratory method for instruction of undergraduates.

As Professor Sanford said in one of the last of his numerous writings, "In my earliest teaching I came to the realization that scientific learning does not consist in reading, memorizing, and talking about science." An advocate of the scientific method of instruction, as he called the laboratory work, he not only contributed new ideas, but also, by his sincere personal interest in every student led each of them individually to think as a scientist. He is remembered by nearly three decades of Stanford students as a teacher of great skill and devotion.

Professor Sanford's conscientious attention to fundamentals carried over into his research work. Among his 63 research papers are many dealing with such basic problems as the mechanism of electrification, the quantities of electricity in various atomic nuclei, and even the possibility -- mentioned in a paper in 1911 -- that some day a way might be found for causing radioactivity artificially. Most of his theories, to be sure, are not incorporated in our present system of knowledge of the structure of matter; but of all the theories in physics, a majority is eventually displaced.

Regardless of acceptance or rejection, Professor Sanford was outstanding for his courageous advocacy of the conclusions obtained through his study of the physical nature of things. Throughout all his scientific work, including twenty years of research as a professor emeritus, he followed the high principle so well stated by Kipling:

"And only the Master shall praise us, and only the Master shall blame,  
And no one shall work for money and no one shall work for fame,  
But each for the joy of the working, and each in his separate star  
Shall draw the Thing as he sees It for the God of Things as they Are."