

**IN MEMORIAM**  
**JOHAN AUGUST UDDEN**

Dr. Johan August Udden was born at Lekasa, Sweden, March 19, 1859. Two years later he came to America with his parents, Andrew Larsen and Inga Lena (Andersdotter) Udden. His early youth was spent in Minnesota where his parents had settled. He was graduated with a Bachelor's degree from Augustana College, Rock Island, Illinois, in 1881 and was married to Johanna Kristina Davis in 1882. He was a student at the University of Minnesota in 1886 and received the degree of Master of Arts from Augustana College in 1889. From 1881 to 1888 he taught natural science and civics at Bethany College, Lindsborg, Kansas, and from 1888 to 1911 was professor of natural history and geology at Augustana College. Although giving temporary service in 1903-1904 his permanent connection with The University of Texas began in 1911 and continued until his death, January 5, 1932. He was made a member of the Graduate Faculty of the University in 1929.

Dr. Udden was connected with several geological survey organizations. He was special assistant to the Iowa Geological Survey, working chiefly during the summer months, in the years 1897 to 1903; geologist of The University of Texas Mineral Survey, 1903-1904; geologist of the Illinois Geological Survey, 1906-1911; special agent of the United States Geological Survey, 1908-1914. He became geologist in the Bureau of Economic Geology and Technology of The University of Texas in 1911 and director in 1915.

Dr. Udden received four honorary degrees as follows: Doctor of Philosophy, Augustana College, 1900; Doctor of Science, Bethany College, 1921; Doctor of Science, Texas Christian University, 1923; and Doctor of Laws, Augustana College, 1929. An indication of Dr. Udden's modest and quiet nature is seen in the fact that not one of his immediate associates, so far as the Committee has been able to learn, knew, during his life, of this last honor received from Augustana College.

Dr. Udden held membership in several scientific societies including the American

Association for the Advancement of Science, (Fellow, 1906) Geological Society of America, Society of Mining and Metallurgical Engineers, American Association of Petroleum Geologists, Sigma Xi, and the Illinois, Iowa, Oklahoma, and Texas (Fellow) Academies of Science. In 1929 he was elected honorary member of the Society of Economic Paleontologists and Mineralogists. His field of investigation included stratigraphic and areal geology, work of the atmosphere, till in the Upper Mississippi Valley, clastic sediments, and related subjects. His published papers on these subjects number about 100 titles. In recognition of his distinguished service in Sciences he was knighted in 1911 by King Gustavus Fifth of Sweden.

Of his long and varied services on geological surveys only a limited account can be given here. Dean G. F. Kay, State Geologist of Iowa, says of him: "The work which he did while connected with the Iowa Geological Survey during the summers of 1897 to 1903 reveals clearly his fine observational powers, his keen analytical mind, and his devotion to the solution of baffling problems."

With regard to his services at Bethany College, his first appointment following graduation, Dr. Ernest Y. Pihlblad said in a recent letter: "He was the first teacher of our institution, which was organized as an academy and remained in this service until 1888. During the last years of his service his teaching was confined to Biological Science and Geology. Dr. Udden during these pioneer years, made a most valuable contribution to the cultural life of the Swedish emigrant in Kansas, which Bethany College was endeavoring to serve. The writer enjoyed the privilege of being a member of his classes. I recall him as a great teacher and warmhearted friend." In his earlier years at Bethany College, it may be added, he not only taught many subjects but in addition edited the local Paper, the "Posten".

From Bethany College he was called to his Alma Mater, Augustana College. With regard to his service at Augustana College, Professor F. M. Fryxell, who is now his successor in that College, writes: "Dr. Udden was a member of the faculty here from 1888 to 1911, and, in my opinion, made some of his most valuable scientific contributions - at least in the field of pure

science - during this period. That he was able to accomplish so much in the way of research is all the more remarkable in view of the fact that he had an extremely heavy and varied teaching schedule, one which nowadays would be considered intolerable. He taught the various courses in Botany, Zoology, Physiology, Meteorology, and Geology during all these years, and at times he helped out in remote fields, History for example. It is interesting to know that he even took his turn at conducting chapel exercises. The Science Club became a live organization under his leadership. One of the finest contributions which Dr. Udden made in behalf of Augustana was the founding of a series of monographs published under auspices of the college, "Augustana Library Publications." Fourteen volumes of this series have been published to date, five being contributed by Dr. Udden during the years he was on our staff."

It would seem that with a teaching load at Augustana College, described by his successor as intolerable according to present standards, conditions would be unfavorable for research, yet during these years originated some of his most valuable contributions to pure science.

Some examples may be used to illustrate the originality of his mind. The training of his student days was general and afforded no opportunity for specialization. In the geologic sciences he was, therefore, largely self trained. For this reason he early came to the conclusion, as he remarked on one occasion, that his best contribution to geology would come through close observations in limited and, in the main, neglected fields of geology. In this connection, Bain, under whom he served on the Illinois Geological Survey, says: "He was not only a man of high character and fine personality, but had a singular ingenuity in finding methods of attack on a problem. I have often thought that was one compensation for his having had largely to train himself. If he had gone through the mill of scholastic training, who knows but his insight might have been blunted." This deliberate selection of unusual problems may be illustrated by citation of some of the titles of his papers. Thus almost the first of his papers, published in 1893, was one on the geologic processes involved in the formation of pellets. In 1894 came the first of his papers on sedimentary processes of the atmosphere, a line of investigation carried through several years

culminating in his important publication on the mechanical composition of wind deposits. In 1895 he published on fossil frost impressions and again in 1918 on fossil ice crystals. In 1897 appeared the first of his papers on loess deposits.

While many of his papers are records of observations, theoretical deductions are not wanting. Thus in advance of actual knowledge he reasoned that potash should be found in the Texas Permian basin. It was on theoretical grounds likewise that he advised the Regents of the University in 1916 of the probable occurrence of oil and gas in the University lands of west Texas.

Upon accepting a call to The University of Texas, Dr. Udden was succeeded at Augustana College by his son Dr. Anton Udden. Anton and his older brother Jon had both been trained in science by their father and the death of these two promising young men was a great grief of the later years of Dr. Udden's life. Of the family of three sons and one daughter, but one son and the mother now survive.

Great indeed were his accomplishments as a scientist, but greater still were his outstanding characteristics as a man and a friend. His sturdy individuality and independence of thought were accompanied by a profound respect for the opinion of others. He was helpful to the fullest extent to his associates and patient in listening to and understanding the problems of those who came to him for help. During his long term of service no one who applied to him was denied his most careful consideration and the benefit of a matured opinion freely given.

Twenty-one years of his life were given in the service of the State of Texas. During this time he initiated important new methods of investigation, recorded new observations valuable to many industries, promoted the development of resources of great value to the state, and gave advice to thousands who consulted him. His highmindedness, his cordiality, his gentle manner, his loyalty to principles and to his friends endeared him to all who intimately knew him and marked him as one of God's real noblemen. The world has been enriched materially, intellectually, and spiritually by his life.

Frederic W. Simonds

Henry W. Harper  
E. H. Sellards, Chairman