

A BRIEF BIOGRAPHY

OF

Dr. William H. Twenhofel

by

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for

The Cristopher Gist Historical Society

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INTRODUCTION

On Sunday, November 12, 1961 the Twenhofel Junior High School was dedicated with appropriate exercises. This beautiful school built to accomodate nine hundred children with provisions for an addition to increase the capacity to twelve hundred, is located in Kenton County, Kentucky, on the Taylor Mill Pike (Ky. 16) approximately one mile east of Nicholson.

Two questions invariably are asked concerning the unusual name for this school:

How did it come to be named "Twenhofel Junior High School?"
Who was Dr. William H. Twenhofel?

Through the answer to these questions and other information given in this brief biography of Dr. Twenhofel it is our earnest hope that the citizens of Kenton County and especially those who will get part of their education in this building, will come to have a better knowledge of, and thus a greater appreciation for this illustrious son.

While on a visit to friends in Orlando, Florida in 1950 I had the privilege of meeting and talking with Dr. Twenhofel. He related some of his experiences as a boy and a young man in Kenton County. He told how he had taught school there and at one time considered making the race for County Superintendent of Schools. He mentioned the fact that he owned a small farm near Nicholson which he hoped some day might be used for community and civic purposes. Several years passed and some time in 1956, Mr. and Mrs. George Klein, relatives of Dr. Twenhofel, made an appointment to see me. They said that Dr. Twenhofel had asked them to find out if the school board would be interested in taking over his farm and using it for 4-H Club Future Farmer Activities, or such other worth while uses as the board might sponsor and supervise. They said that in 1955 he had offered this tract of land to the Kenton County Fiscal Court for park purposes. His thought was that he would like to make a gift to the people which might enrich and help to add beauty and meaning to their lives. The Kenton County Authorities replied that they could not accept the property with any strings attached indicating how it was to be used. He did not pursue this idea any further as he was afraid they might build a jail on the site and he would not be pleased with that use of the property. I told them we were looking for a site near Nicholson on which to build a Junior High School

some time in the near future and if such use would meet with his approval we would be glad to consider accepting the farm. Some correspondence between the writer and Dr. Twenhofel followed this conversation with the Kleins. I quote from a letter received from him some time in November, 1956:

It is my intention to give the small farm I own in Kenton County to some worthy cause. I have three objectives in mind. The first is that the gift may be of service educationally to the people of rural Kenton County. The second is that it may be a memorial to my parents, Ernst A.H.J. Twenhofel and Helena Steuwer Twenhofel. The third is that it be used always for the purpose for which it is given. Your letter mentions that it might become a site for a junior high school building and that would be acceptable, but the Future Farmer Use should be continued. I would object to its use as an athletic field. Your suggestions are currently high in my consideration and if you wish to go ahead, please draw up a statement setting out the uses you propose to make of this property and submit to me. A decision will be made without delay.

We drew up such a plan and submitted it to Dr. Twenhofel, but before a deed could be drawn up and signed he died. Eventually however, a deed was signed by all the heirs and the farm became the property of the Board of Education in fee simple.

Immediately the Board of Education passed a resolution to the effect that the school to be built on the site would be named "The Twenhofel Junior High School" in honor of the man who had freely made such a generous gift.

On the front page of the program for the dedication is to be found this quotation:

The land on which this school is located was donated to the Kenton County Board of Education in 1957 by Dr. William H. Twenhofel, geologist, botanist, educator, humanitarian and a native of Kenton County. It was part of his father's farm and it was his desire that it be used to further the education of the youth of this community. The school bears his name in tribute to his memory and generosity.

I quote three paragraphs from an editorial in the Kentucky Post and Times Star of date, November 10, 1961, omitting that part which has to do with acquiring the farm:

When Governor Bert Combs and many others gather Sunday at 2:30 P. M. at the new Twenhofel Junior High School near Nicholson for a Dedicatory Program, a story that goes back for a number of years will have been brought to its climax.

The site of the school was once a small farm (28 acres) owned by Dr. Twenhofel, an internationally known geologist, whose boyhood had been spent in his native Kenton County. Dr. Twenhofel had a sentimental attachment to this community despite the fact that his career took him to far away places and in the latter part of his life he did not spend too much time here.

It is easy to understand when one hears this story why the new junior high school is being named for Dr. Twenhofel. What more appropriate way could have been devised for donating that land for a noble purpose. Certainly the school will be an everlasting memorial to Dr. Twenhofel's memory.

Thus we have the answer to the question as to why the school was so named. Let us now turn to the second question which will require more elaboration to arrive at a satisfactory answer. Due to limited time for research and study concerning the life and activities of Dr. Twenhofel and desiring to be accurate and factual in what we write this will be, of necessity, a rather sketchy record of the high-lights in the career of this benefactor who enjoyed a world wide reputation in the field of geology. He was not only an educator, scholar and writer, but a humanitarian as well. Kentucky and Kenton County should honor him and place him among the native sons who have brought fame and honor to their homeland.

It is indeed regrettable that Dr. Twenhofel could not have lived to be present on this occasion. I am sure he would have felt that his gift was being used in the way he would have most liked it to be used. However, one of his daughters, Mrs. Carl C. Pfeiffer and his son, Dr. William S. Twenhofel were present and I am sure they felt very proud of this wonderful memorial to the memory of their father. Due to circumstances over which they had no control, his daughter, Mrs. Helen Cook and his sister, Mrs. John Rice, could not be present.

ACTIVITIES

"Tis virtue and not birth that makes us noble;
Great actions speak great minds."

William Henry Twenhofel was born April 16, 1875, in Covington, Kentucky. He was the son of Ernst August Herman Julius and Helena Steuwer Twenhofel. He had a younger sister, Etta, now Mrs. John Rice who resides in Richmond, Virginia. When he was three years old his parents bought a farm near Nicholson and moved the family there. Their home on the farm was a two story log house which was torn down to make way for the magnificent new school which bears his name. He attended a one room school at White Tower, which was about a mile down the dusty road from his home, until he had received all the education he could get in such a school. Then his father put him to work on the farm. A story is told about how one day when he and another boy were hauling rock he saw some young people on their way to Dunlap Academy, a private school in Independence. Throwing down his shovel he made the remark that he did not intend to shovel dirt and rock the rest of his days but was going to school to get an education and make something out of his life. Much against the wishes of his father he enrolled as a student in the Dunlap Academy, where he made quite a reputation and a record as a scholar, debater and orator, winning a gold medal for proficiency in Public Speaking.

Boyhood friends and relatives, who are still living, tell many interesting stories about his youthful years. I could fill several pages with these stories but just a few will serve to illustrate a point I shall mention later.

It seems there was a boy in the neighborhood who was somewhat different from the rest of the boys. One day they thought it would be fun to play a trick on him. They tied him up and told him they intended to burn him at the stake. This, of course did not add to his peace of mind and he began to beg for his life. The game came to an end with the arrival of an older person. Once he and another boy attempted to swim their horses across the swollen Licking River with almost disastrous results. They were rescued from the rushing waters by the heroic efforts of some men who were near by and saw their struggles. Another time he and this same boy built a "John-boat" and intended to drift down the Licking River to the Ohio and then up to a creek in Lewis County where they hoped to enjoy some good fishing for

a few days. The father of the other boy would not permit him to go on a trip so young Twenhofel started out on the journey alone. He got his boat down the Licking and into the Ohio but then ran into trouble. Waves from a steam boat caused his boat to capsize. He lost his gun and all his provisions but was rescued from the river by some men in a row boat.

It seems that the boys in the neighborhood enjoyed reading stories about the wild west and the feats of the cowboys. They would trade these books back and forth among themselves so that all could enjoy the stories. Young Twenhofel had more of these books than the rest of the boys, in fact, we are told that he had a room piled high with books which he read with great interest. One day the boys decided to try out some of these cowboy feats themselves. They made their lassos, got on their horses and proceeded to see who could be the first one to rope a boy and pull him off his horse. The game was broken up by the irate father of one of the boys who took their ropes and cut them into small pieces. That proved to be the end of the cowboy game. He and a younger boy, John Riggs, on Sundays and other days when they could get off from work, roamed the woods and along the many creeks in Kenton and adjoining counties, looking for unusual wild flowers, Indian arrow heads and fossils. He had a large collection which he kept in his room under lock and key. This early interest in flowers and fossils never waned during his lifetime.

It is said that, "Coming events cast their shadows before," and, "The boy is the promise of the man to be". There is much truth to the statements so far as Dr. Twenhofel is concerned. During his boyhood he gave evidence of possessing the intelligence, interest and curiosity that made his later life so full of activity and achievements. These stories all point up to the fact that he did not always have his face in a book, although he did read much. He was restless, active and full of the spirit of adventure and the determination to try new and novel ways of doing things.

After completing his work at the Dunlap Academy he took the examination for a teaching certificate and received a first class certificate. He received the promise of a school near by, but before the contract could be signed the school was given to an older man. This so discouraged him that he built a boat, took it to the river and started on a long trip to some far-away place.

He was not quite sure about his destination but started on his way. However his boat sank and he returned home determined to get another school. How close we came to losing a great teacher we will never know. He began his teaching career in a one room school in the Fall of 1896, and continued teaching in Kenton County until 1902. Records in the Kenton County Board of Education Office show him taking examinations for teaching certificates in May 1898 and again in May 1902. There is no record of the first examinations he must have taken. He made grades of 98-100 in each subject and was granted a first class certificate both times. The records show that he taught one room schools at White Tower, Independence and Nicholson. The record further reveals that in 1901 he was paid the magnificent salary of \$ 25.40 per month for a term of six months. This was for teaching at Nicholson. During the off months when school was not in session we find him attending National Normal University in Lebanon, Ohio, where he took courses which would help him in teaching and also ultimately lead to a degree. He entered for full time work in 1902 and was granted an A. B. Degree in 1904. At this Institution he came under the influence of some of the greatest teachers of the times. Lebanon was noted for its scholarly faculty and the training of great teachers. He must have been a frugal man, as he was able to live, go to school and get married on such a small salary. However, he supplemented his meager teaching salary by working in the hay and tobacco fields around home when he was not teaching or going to school. On September 10, 1899 he married Miss Virgie Mae Stephens, who, I am told, was the only sweetheart he ever had, and who proved to be a good companion and helpmate all through his long life.

We find him in the fall of 1904 teaching Mathematics and Science at East Texas Normal College, Commerce, Texas. While there he made a study of the geology of parts of Texas and made a large collection of fossils which he found in the region. In 1907 he resigned this position to enter Yale University. Just why he chose this University we do not know. But it is known that at Yale there was a very fine Department of Geology with several outstanding teachers. In a period of five years he earned three degrees from that institution-A.B. in 1908; A.M. in 1910 and Ph.D. in 1912. It is said that, while at Yale, he came under the influence of two great geologists and teachers, Schuchert and Barrell, who undoubtedly had much to do with his

great interest in three areas of geology, namely: Sedimentation, Paleontology and Stratigraphy. It was in these areas that he made his great contributions. In the preface to one of his books he acknowledges his indebtedness to Joseph Barrell, from whom he gained his first appreciation of the problems connected with sediments.

Before he completed his doctorate at Yale he took a position as Assistant Professor of Geology at the University of Kansas. This was in the fall of 1910. He was made an Associate Professor of Geology in 1913. In 1916 he resigned his position at Kansas to become Associate Professor of Geology at the University of Wisconsin, becoming full professor in 1921 and Chairman of the Department in 1940. He was retired by the University in 1945 upon reaching the age of seventy.

In addition to the above teaching positions he was visiting professor at the following Universities -

Stanford University - Summer, 1930

Yale University 1946-47

University of Tulsa 1947-48 and again in 1950

In spite of his heavy teaching load at Kansas and Wisconsin he found time to engage in extensive research and writing, particularly in the area of sedimentation. However to place him in this category alone would not be telling the whole story for his interests covered the entire field of geology.

In 1914 he went to the Baltic Region with the Shaler Memorial Expedition where he spent a summer studying the geology of that area. As a result of his study and research during that summer he wrote an extensive paper on the strata of that region. In 1915-16 he served as State Geologist of Kansas. While serving in that capacity, in collaboration with the U. S. Geological Survey, he made a study of the geology of that state. In the same year he wrote an extensive paper on, "Geology, Soil and Civilization", in which he pointed out the seriousness of soil erosion and its effects on coming generations. In later years several of his papers dealt with soils and how they affect living and the movement of people from one area to another.

In collaboration with others he wrote three books on the subject of sedimentation which have become standard reference matter material:

Treatise on Sedimentation - 1925 Revised 1932
Principles of Sedimentation 1939
Methods of Study of Sediments 1941

In connection with one of these books, Mr. Orle Ware, former Member of Congress from this District, and a boyhood friend and schoolmate of Dr. Twenhofel, tells this story. It seems that some legislation dealing with flood control on the Upper Mississippi River was pending in the Congress. One day a fellow congressman from Nebraska came to him with a large book saying that it contained the final authority on the subject. Mr. Ware took the book and opened it to the fly-leaf and noticed that the author's name was William H. Twenhofel. He handed the book back to his friend with the remark that he was a boyhood friend of the author and he was sure that the material in the book was accurate and authoritative.

In collaboration with Dr. R. R. Shrock of the Massachusetts Institute of Technology he wrote two other books:

Invertebrate Paleontology
Principles of Invertebrate Paleontology

Two of his books are in wide use as college textbooks:

Treatise on Sedimentation,
Principles of Invertebrate Paleontology

He made extensive studies of the geology of the St. Lawrence River Basin, making many trips to the region to collect fossils and study the geological formations. This work was undertaken for the Geological Survey of Canada. A dozen or more extensive reports were made on its geology and paleontology. The most extensive and important of these being the "Geology of Anticosti Island", (1927) and the "Paleontology of the Mingan Islands", (1938). It has been said that his explorations in this region provided mankind with basic geological information and knowledge which is sorely needed today.

He made similar studies in Newfoundland, Maine, the Upper Mississippi River Valley, Wisconsin, Kansas, Texas, Oregon, Florida and Kentucky. In 1928-31 he worked with the Geological Survey in the study of the geological formations of Kentucky and in 1931 wrote up his finding in a 230 page report- The Building of Kentucky. In the introduction to this report, Dr. Twenhofel said it was written for the layman and efforts had been made to limit the use of technical terms. He mentioned the fact that Kentucky was his native state and he had as a boy collected fossils from its creeks and rivers. The report is interestingly written and is replete with pictures and charts. In his later years he gave much attention to the sediments of fresh water lakes and several papers deal with this subject.

It is said that his published papers probably exceed 130 with many additional reports to committees of which he was a member, and to oil companies and engineering firms for which he was a consultant. Although the majority of these dealt with sedimentation, stratigraphy and paleontology, yet he wrote many others which dealt with subjects covering the entire field of geology.

For almost thirty years he devoted much time to the affairs of the National Research Council of the American Academy of Science. He served as Chairman of the Committee on Sedimentation for eight years. He was Chairman of the Division of Geology and the Geography for some years and in connection with the work of this committee, spent considerable time in Washington City. After this he became Chairman of the Committee on Paleontology and spent long hours on the preparation of the annual reports of this committee, which were said to have been outstanding. He was a fellow of the Geological Society of America and served that organization as Councilor and Vice-Chairman. He was a fellow of the Paleontological Society, which he served as Vice-President in 1924 and as President in 1930. He was a member of the American Association of Petroleum Geologists for many years rendering valuable service in various capacities. In 1946 he made a Distinguished Lecture Tour for the Association and in 1947 was made an honorary member. On this occasion Dr. R. R. Schrock had this to say about him:

With the wide recognition among petroleum geologists of the growing importance of sedimentation, it is most appropriate that the Association should bestow its greatest honor upon William Henry Twenhofel—the man who has been so largely responsible for bringing the study of sediments and sedimentary rocks to the prominent position it now holds in geology. He is the 30th man to receive this honor. An honorary member is elected by the executive committee of the Association in recognition of distinguished services to the cause of petroleum geology. Twenhofel has rendered such service in full measure. He is first and foremost a geologist; secondarily a sedimentationist, stratigrapher or paleontologist. So broad has been his interests and so varied his investigations that to look upon him as a specialist reveals only partly the true measure of his contributions to geology.

He was a long time member of the Society of Economic Paleontologists and Mineralogists, serving as president in 1935 and was made an honorary member in 1949. He was a member of the American Association for the Advancement of Science, of the Florida Academy of Science, Wisconsin Academy of Science and an honorary member of the Tulsa Geological Society.

Indicative of the esteem in which he was held by his colleagues he made countless lectures in many parts of the country, speaking before distinguished audiences and receiving acclamations wher ever he went.

He was editor of the Journal of Sedimentary Petrology from 1933 to 1951 and associate editor of the American Journal of Science from 1933 to 1957. At one time he was consultant to the Jones and Laughlin Steel Corporation, a long time consultant to the Magnolia Petroleum Corporation of Texas and later a consultant to several engineering firms in Florida and other places.

In 1952 he was given the award for distinguished services to science by the Society of Exploration Geophysicists. He was recognized as one of the learned men of the world in his field when in 1947 he was granted an honorary Doctor of Science Degree by the Louvain University of Louvain, Belgium.

In recognition of his scholastic achievements he was elected to Phi Beta Kappa, Sigma Xi, Phi Kappa Phi, Sigma Alpha Epsilon. While at Kansas he was one of the founders of a geological society, Sigma Gamma Epsilon, which has become a national fraternity with chapters in many universities across the country. He was listed in Who's Who, American Men of Science, Cyclopedia of American Biography and Websters Dictionary of Biography.

It is altogether probable that we have failed to list some of the groups with which he was affiliated since he was such an active person in his field of endeavor.

This extraordinary man had interests other than geology. Some how he found time to become an active member of Rotary International and was President of the Madison Rotary Club in 1940. He was quite an amateur gardner and botanist. While on his many trips to remote places he collected fossils and strange and unusual plants which he brought home with carefully made notes about their habitat and characteristics. The plants he placed in his garden in such a way that they grew as though they had never been disturbed. His garden was not arranged in rows or regular lines but so laid out as to give the impression that nature had done the planting. His daughter tells us that their garden contained magnificent beds of Iris, Lady Slippers and other flowers which presented a riot of color and a very lovely appearance. He was willing to try the unusual as evidenced by his trying to grow Dogwood and Magnolia trees in Wisconsin and Peonies and Apples in Florida, without much success however. He was a long time member of the American Orchid Society and when he moved to Florida he became a member of the Central Florida

Orchid Society. He seemed to have an unusual interest and success in growing beautiful varieties of orchids. He bequeathed his collection of approximately 150 full grown specimens to the city of Winter Park, Florida for its collection in the Mead Botanical Gardens.

Mention has been made previously of his interest in fossils. He said fossils were not mere lifeless stones, but were once part of a living world. It has been said that he could read geologic history in fossils with a skill that few men ever attained. This early interest never waned and throughout his long life he collected rare and unusual specimens which he carefully catalogued and preserved. Many species and genera bear his name and one he named Virginia in honor of his wife. His valuable collection of 35 drawers was given to Yale University.

Upon his retirement from the University of Wisconsin in 1945 he moved to Florida, but he did not cease to be active. He became a member of the University Club of Winter Park and gave considerable time and effort to the affairs of that club. He was a fluent speaker and was much in demand for Rotary Clubs, Garden Clubs and other groups. His speeches were always well prepared and while he carried notes he seldom referred to them. He made lecture tours out of the state and continued to act as consultant to oil companies and engineering firms. He began a study of the geology of Florida, particularly of its many fresh water lakes.

He continued in good health until December of 1956, when he underwent a serious operation. Apparently he never fully recovered from this operation and was taken to a hospital in Atlanta, Georgia, where he died on January 4, 1957. His wife had passed away in October of 1956. He was survived by two daughters Mrs. Carl C. Pfeiffer of Princeton, New Jersey and Mrs. Helen T. Cook of Orlando, Florida; one son, William S. Twenhofel, geologist with the U.S. Geological Survey in Denver, Colorado; one sister, Mrs. John Rice of Richmond, Virginia and several grand children.

Hundreds of letters and telegrams expressing sympathy came from colleges, former students and friends from all parts of the country. The New York Times, The Atlanta Constitution, all the papers in Florida and Wisconsin as well as papers from all sections of the country carried notices of his death and many had editorials extolling his great contributions to science and to his greatness as a man and teacher. Professional groups and lay

organizations, to which he belonged, passed resolutions. We will have occasion to quote from some of these later on in our evaluation of Dr. Twenhofel as a man and a teacher.

So far this has been largely a chronological narrative of the activities and achievements of Dr. Twenhofel. It would appear that some attention should be given to his characteristics as a teacher and as a man. Such an evaluation should give valuable clues as to why he could achieve so much distinction and high esteem in the span of a life time.

AS A TEACHER

"And gladly would he learn, and gladly teach"

Dr. Twenhofel began his teaching career in 1896 in a one room school in Kenton County, Kentucky and ended with his retirement from the University of Wisconsin in 1945. This career covered a span of fifty years, with a few years out while he was getting his degrees. If we assume that he started to school at the age of six years, he spent a total of sixty-four years in the school room, as pupil and teacher. For one to have spent so many years in the classroom he must have had a great love for teaching and considerable talent in addition. There is an old saying, oft repeated, that a great teacher is born and not made. While I agree in some measure with this statement, yet I believe that good training, under inspired teachers, is absolutely essential for the making of a successful teacher.

At the Dunlap Academy he had two very wonderful teachers, Dr. Dunlap and Mr. C. V. Lucy. I personally knew Mr. Lucy and many of the former students of the Dunlap Academy have told me about the teachers ability of Dr. Dunlap. These two men were inspiring teachers, yet exacting, both as to discipline and in requiring the utmost in effort of the student. At Lebanon, as mentioned previously, there were some of the best teachers to be found anywhere. During my student days I had the privilege of sitting under the instruction of a former professor at Lebanon. He was inspiring, thorough and exacting. At Yale Dr. Twenhofel came under the influence of two great teachers who guided and directed his thinking and interests into certain channels that affected all his later activities in his chosen field. I understand that he was the only pupil enrolled in one class. What a rich experience it must have been for him to have had the undivided attention of a teacher who not only knew his subject, but had the ability to impart his knowledge and enthusiasm to his pupil. Surely, native ability and determination combined with superior training to produce in Dr. Twenhofel a master teacher.

During his long tenure as a teacher he must have lectured to thousands of students. It is said that his beginning classes in geology at Wisconsin always numbered from 100 to 150, in spite of the fact that it was considered one of the hardest courses on the campus. He discouraged the weak and indifferent students from entering the course but still they came in great numbers.

Most college courses are strictly of the lecture type, but Dr. Twenhofel varied his procedure by lecturing for a part of the period and then turning to a question and answer, or discussion method, of conducting the class. He made his classes more informal than the usual college class by calling his students by their first name. They in turn responded by calling him "Twen" or "Twennie". This nickname was used, not only by his students, but by his colleagues and friends. This informal relationship between teacher and student greatly endeared him to them and made him one of the most respected and popular professors on the campus. His lectures were stimulating and filled with interesting stories and incidents that aptly illustrated the points he was trying to make. Students long remembered the substance of his lecture by recalling the stories he used in making his points. His daughter tells us that it was the custom at Wisconsin for the students at the end of each lecture they considered to have been good, to give what they called a "Sky Rocket", (a sort of cheer involving a hiss, a shout, a whistle and the name of the instructor). Dr. Twenhofel seldom, if ever, failed to get such an ovation.

He believed that the best way to teach geology was by lecture, discussion, laboratory work and field trips. He placed great emphasis on field trips. He felt that these trips afforded an opportunity for teacher and student to get better acquainted, to get on a common footing, and to form friendships that would last through the years. That he was correct is attested to by the fact that he received hundreds of letters from former students, whether they were in the field of geology or not, expressing their appreciation for having had the opportunity to come under his instruction and influence. No former student ever visited the campus without dropping in to visit with him. In his files there is a letter from a colonel of the Air Force who had previously been an advisor to a Cabinet Minister. He wrote to his former teacher to tell him how, upon flying over Anticosta Island, he reduced his altitude so he could review once more from a new position the classroom instruction of twenty years before. Although the young man had gone into a field of study other than geology he had caught something of the zeal, the interest, and the fascination of knowledge from his teacher. He went on to describe what he saw, to say how much he remembered of what he had been taught, and how grateful he was for having had him as a teacher. During the war a former student came to visit him.

He handed Dr. Twenhofel a piece of rock with the remark that there was a great hill of such rock there, but he could not tell him where it was. Dr. Twenhofel took the rock, looked at it, and told the young soldier just where he had found the specimen. His knowledge of geology was indeed world wide.

It was his custom to take the beginning class in geology on an all day field trip each Saturday during the fall and spring months. His daughter, who always accompanied her father on these trips, gives us a description of the action:

The distance walked was never less than five miles and often as much as fifteen miles. He always wore slouch hat, an old suit jacket worn at the elbows, khaki pants and knee boots. He would stride ahead of the class at a rapid pace, often silhouetted out in front and then on arriving at the outcrop start hammering the rocks as the panting stragglers came up. Again and again students would vow to keep up only to fall farther and farther back as the merciless pace kept up.

I understand that there was also an annual field trip to the Baraboo Hills. Dr. R. R. Schrock describes these trips in the following language:

The annual field trip to the Baraboo Hills was an unforgettable experience and many a future geologist cut his eye teeth on the geology of that magnificent area. The trip welded students and professor together with a bond of common understanding and friendship that was to last beyond the college years and Twenhofel's spirit was the motivating force. Little wonder that at professional meetings he was usually found in the midst of a group of his former students.

He was deeply interested in his students, not only in their scholastic advancement, but in their personal welfare. It is known that he many times gave financial assistance to some worthy student. He regarded each student as an individual and made every effort to help him realize his own potentials without coddling or discouraging him. He was patient and painstaking in presenting his material, always requiring a great amount of effort on the part of the student. He believed there was no easy road to knowledge and he required his students to master whatever they undertook. He encouraged them to investigate and determine for themselves what was fact and what was theory. Because of his encouraging them to high scholarship and motivating them to give and do their very best in every field, he exercised a radiating influence for good which extended far beyond the walls of the classroom.

There is much evidence to substantiate the statement that his greatest contribution in life was not in his writings or in his investigations, extensive and important as they were, but in the impact and influence he had on the thousands of students he guided and directed through his many years of teaching. Many of his former students are today's leaders in geology and in other walks of life and they remembered him with a fondness that is seldom given to other teachers.

As I write this I am a little depressed because we have so few great teachers today, teachers who inspire their students to work to the limit of their capacities, who beckon them from the heights to move up to higher planes of thinking and achieving. Too many teachers today cease to be students themselves after they have received their degrees. They read few books, do little or no research work and never do any creative writing. They never do any follow up work on their students and are themselves forgotten by their students in a few years. They use the same notes year after year and their lectures never excite students or whet their appetites for further study or information. It is indeed refreshing to gather information about a great man, such as Dr. Twenhofel, who combined all the essential elements into one personality to produce a teacher who left his imprint on the lives of thousands of students who today follow in his footsteps. We humbly pay our respects to a great teacher.

ECCE HOMO
Behold The Man

If you can walk with crowds and keep your virtue,
Or walk with Kings - nor lose the common touch,
If you can fill the unforgiving minute
With sixty seconds' worth of distance run,
Yours is the Earth and everything that's in it
And-which is more-you'll be a Man.

(Kipling)

Dr. Twenhofel exemplified in his life the spirit of this poem. He could walk with the great and the near great and not lose the common touch. He came from humble circumstances and although he attained world wide status in his chosen field he never outgrew his early environment. He was not a time waster, but filled the minutes with activity and worth while accomplishments, and the world honored him for his efforts.

Let us take a look at this man through the eyes of some of the people who knew him best. It would seem that these people can give us a better picture of what he was like, how he did his work, and how he reacted to various situations; than any one else.

His daughter describes him in the following words:

In appearance he was thin, wiry and bald. A man of great physical stamina, somewhat careless in his dress, though always neat, but not stylish. His smile was warm, his chuckle infectious, a ready wit and his frown to be feared. He was a man of tremendous energy, a do-it-yourselfer, an encyclopedia of information, a sharp mind and a keen memory, an interesting talker, a pioneer, a tee-totaler, a saver of everything from string to money, a conformist and yet a non-conformist. He was much in demand as a public speaker, busy with all kinds of committee and club activities, constantly carrying on scientific research, and publishing articles and books.

The basic philosophy which guided his whole outlook and in which he believed with complete fervor was that the one way for the individual to build a better life for himself, and for the world as a whole to solve its problems, was through education. From his earliest youth he directed his sights toward that goal for himself and attained it through his own efforts.

He considered drinking and smoking vicious, degrading, expensive and was intolerant of both. He was intolerant of stupidity, ignorance, hypocrisy, left-wing politics, religious trappings, welfare states and "Do-gooders".

Because of his belief in the value of education he was concerned that political leaders and others failed to take cognizance of the importance of geology in their various projects and plans. Long before the dust storms of the '30s he was crying out

against the extensive cutting down of timber and the consequent inevitability of soil erosion. He constantly maintained that the country needed to look to its water supply and that ground water was a valuable resource not to be wasted. During the Roosevelt Administration he was strongly opposed to the plan for cutting a ship canal across Florida. He argued that such a canal would tamper and interfere with the underground water channels in that limestone area and that the results would be complete drainage and destruction of the central Florida Lakes.

He did his writing at night in the living room. He would prop a card table on his lap with two legs on the floor, spread the references on the adjacent davenport, while the children would be shouting and carrying on their activities. He wrote in long hand and he was not a very good penman, using the back of used typewriter paper -there was no use to waste it: Then he would type these manuscripts by means of the hunt and peck method, using an old tempermental Underwood typewriter. The next step would be to cut the material into strips and paste the pieces into a new order. Since neither his hand writing nor his typing were of the best, the manuscripts frequently went to press with a number of typographical or orthographical errors. However, he was a good proof reader and the success of his several volumes bears testimony to this, as well as the scholarship that went into them.

As a do-it-yourselfer he was not too successful, as attested by the shaky furniture he tried to make. His family tried to discourage him in this venture, but he refused to admit that he was not a good artisan. There was scarcely any project in any field that he did not feel quite capable of undertaking to do himself.

He was a pioneer in the "Move to the Suburbs". In 1920 he built a house three miles from the outskirts of Madison in a wooded area and bought up all adjacent land he could afford. Every one thought he was crazy to invest his money in this way and "Move so far out in the country away from civilization". It was not until 1935 that neighbors began to come and turn the district into a modern suburbia, something he had foreseen fifteen years before. He walked six miles to and from the University every day, in every kind of weather while the car sat in the garage, and insisted that the children do likewise. This often meant wading through snow a foot deep and there were no side walks and no cleared roads.

He bought his property in Orlando, Florida, without ever having seen it. He studied the U. S. Topographical Map of the area, then he purchased it. He took the train to Orlando and walked the twelve miles out in the country, map in hand, to find his property. It was remote, covered with scrub timber, and undeveloped. Today it is a combination of suburbia and citrus groves. He was seventy years old when he moved to Florida, built a house, much of it by his own labor, cleared the land, and planted citrus trees. It takes approximately seven years for a citrus tree to mature and bear a crop. Some one said to him, "I hear you are planning to live to be a hundred years old, planting orange trees at your age". I intend to carry on as though I will", was his reply.

Dr. R. R. Shrock, who collaborated with Dr. Twenhofel in the writing of two books, has this to say about him as a man:

Born and bred with the outdoors in his blood, Twenhofel has always been a great lover of nature. It was only natural, therefore, that when he chose geology as his life work he selected those aspects of the subject which would allow him to roam as he wished, over the countryside. He has always believed that every faculty of a geologist should be used—the feet to carry him across the strand, along the cliff, and over the rocky wastes; the eyes to search out the endless detail of the geological record; and the mind to analyze the significance of these details. In this age, when so much emphasis is being placed on speed, geology needs men like Twenhofel who, unhurried, travel across the terrain with deliberate step and practiced eye and who are willing to pace the endless miles to see if there is something different and significant in the next cove or beyond the distant hill.

Although he has now passed three score and ten, Twenhofel's inquiring mind and anxious feet will not be still. He continues to do the work of a person many years younger and his step retains the spring of a woodsman. Little wonder, then that whether it be by plane, rowboat, auto or foot, he is always ready to go afield when the opportunity comes.

Fortunate is the scientist who, as he turns his gaze back along the trail, sees his disciples following in his footsteps and beckoning to their own students in turn. So moves the endless procession of men, each in his appointed time and along his chosen path. Few are granted the privilege and responsibility of being great leaders, of influencing thought, of stimulating research. Twenhofel has long marched with those selected few, yet he has never lost the common touch.

Mr. John Riggs, one of his boyhood friends, and one who was constantly with him during those early years, has this to say about him:

As a boy he was adventuresome, curious and always on the move. His burning ambition was to get an education and make something out of his life. Whenever he

visited relatives in Kenton County he never failed to spend some time with me. He liked to recall the many experiences which we shared as boys, we had many good laughs over the escapades of those days. His promise never seemed to change his attitude towards his friends of years gone by. He was indeed a self made man, getting his education entirely through his own efforts.

The Reverend Louis Schultz, of the First Congregation Church of Winter Park, Florida, gave the Memorial Address on the occasion of his funeral in Orlando, on January 8, 1957. I quote a few paragraphs from that address:

His areas of personal interests constantly widened with the passing years. In his latter years he reached beyond the areas of geology and its scientific and industrial aspects to plant life. He soon became an expert in subtropical plants. Beside the plain unadorned casket containing his remains, there stands this exquisitely beautiful mass of orchids from his own plants and that speak with the silent eloquence of their abundance and their rich color and variety. They comprise a silent eulogy to his skill and care.

Above all, William H. Twenhofel was a humanitarian. I am certain he would say, "Write me as one that loves his fellowmen." His interests in his students stimulated them; he encouraged them to press on to the fullest extent of their capacities, rather than drag through the years using but a fraction of their capacities. He had no patience with buried talents nor unfulfilled capacities. His own curiosity was contagious. The spark from him took flame to burn brightly in the lives of so many who had come to know him. For non professional persons he organized "Get-a-Way" Clubs where the uninitiated could learn something of geology in the fields and hills of their own area. He organized Social Clubs where people could just enjoy themselves in each others company or discuss books and conditions of interest.

His tireless curiosity and interest in life was impressed upon me when I visited him in a hospital a few weeks before his death. He was impatient to be up on his feet and back to his work. When it was suggested that at 81 years of age he ought to be willing to sit back and rest, he spoke of plants to be cared for, students expecting his response to their requests for his advice, at least two industrial concerns were expecting a report from him on professional matters.

His interests reached out still wider, even to those he never met nor ever would meet. A patrimony, his father's farm in Kenton County, Kentucky was given to the Future Farmers of America through the local school board where field work as well as class work in a Junior High School could become the seat of learning and practice for young people who love the earth and its fruits. Nor did he forget the struggling graduate student who so often comes to the verge of accomplishment and fails because of lack of funds. Dr. Twenhofel arranged for a Fellowship Fund in the graduate study of Geology at his Alma Mater, Yale University.

Dynamic, curious, brilliant and kind, he lived the life of a scholar, author, teacher, friend, benefactor, husband and father, dearly beloved. He lived many lives wrapped in one person in a single life term. Chronologically, he was eighty-one years of age, but he showed the interest and did the work of several men in a single life time.

My own personal contact with Dr. Twenhofel was limited. I met him just once, at the home of a mutual friend who lived on the same beautiful lake and whose homes were only a few steps apart. I talked with him for about an hour and found him to be warm, human, witty and a good conversationalist. He told me about his early experiences as a boy in Kentucky and mentioned several of his friends there. He spoke of them with a fondness that indicated to me his love for people he had known in the years long since passed but whom he had never forgotten although his career had taken him to far distant places and his contacts with them had been infrequent. He was preparing to get away to some distant place to carry on some important bit of research or investigation for some oil company or engineering firm and he seemed to be looking forward to the task with a zeal that would have done credit to a man half his age.

One could sense that this was no ordinary man, from the conversation and manner, which was simple, direct, warm and friendly. These are the traits that indicate greatness. I shall be eternally grateful for the privilege of meeting for even a short time, Dr. Twenhofel. I can readily understand why he was such an inspiration to those students who sat in the classroom under his instruction or who went with him on those field trips.

I close this brief account of the life and activities of this great person with this verse from the pen of Robert Burns:

A prince can make a belted knight,
A marquis, duke, an'a'that
But an honest man's aboon his might,
Guid faith he mauna fa'that,
For a'that, an'a'that,
The pith o' sense and pride o' worth,
Are higher rank than a'that.

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Memorial Address by. Rev. Louis Schulz

Bulletins of the American Association of Petroleum Geologists
Vol. 31 No. 5 -- Vol. 41 No. 5

Resolutions of the University of Wisconsin

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