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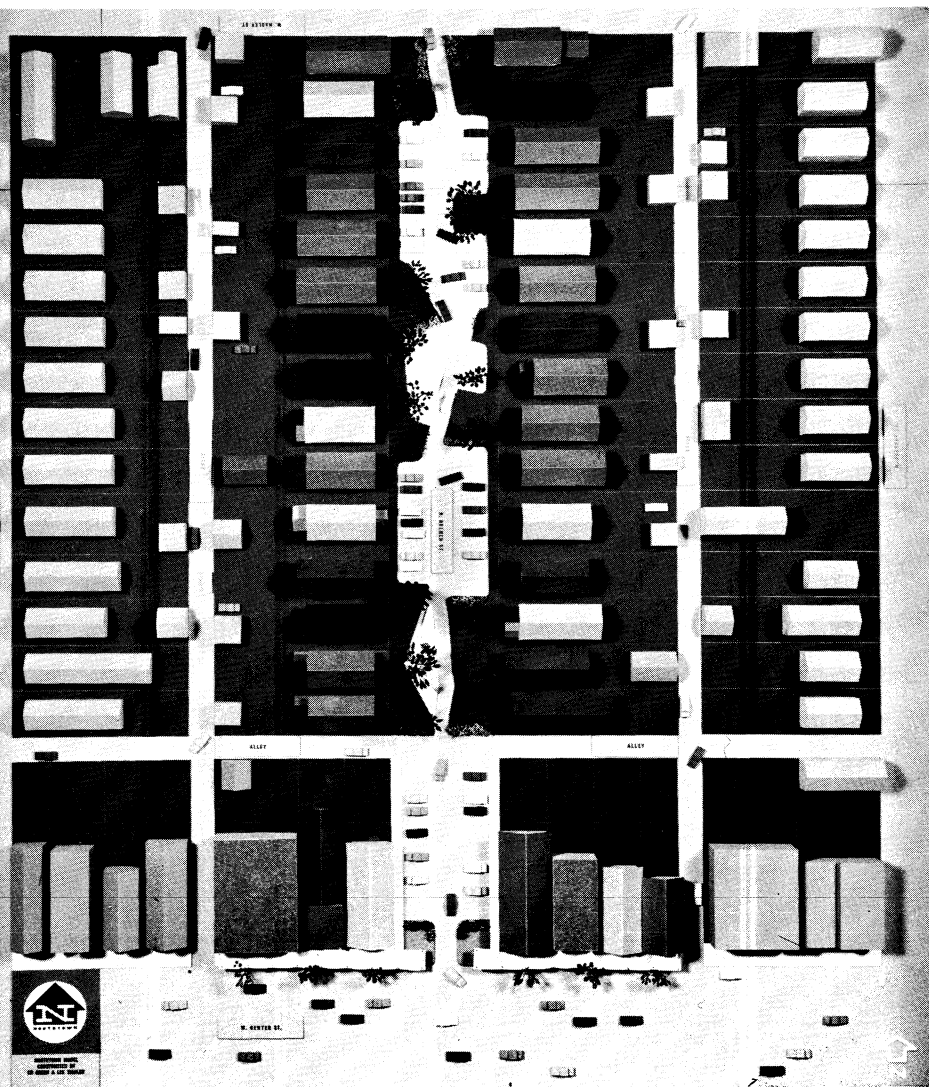
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WISCONSIN ACADEMY REVIEW

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THE MENTAL PRISON

By Mark H. Ingraham
Dept. of Mathematics
University of Wisconsin

MARK H. INGRAHAM is professor of mathematics at the University of Wisconsin, a position he resumed in late 1961 after a 19-year period as dean of the College of Letters and Science. Even before his appointment as dean, Mr. Ingraham occupied an influential position on the faculty and he has done extensive research and held high office in professional associations. In an era when training of specialists has preoccupied many educational leaders, he has spoken up for liberal education, stressing the nation's need for broadly cultured individuals.

The name, "Wisconsin Academy of Sciences, Arts and Letters," is an expression of faith that there are common interests shared by scholars. Our function is not that of a second-rate adjunct to specialized learned societies but of a unifying influence in the intellectual life of the state. The intellectual life, not only of the state but of mankind, need unification--a unification wedded to diversity.



What I shall say comes chiefly under three headings: 1) A balance on the part of society, and especially of universities, in the support and opportunities it furnishes the various disciplines; 2) Breadth as a part of our ideal for the individual intellect; 3) The scholarship of synthesis as a necessity if we are to have breadth of interest and balance of support.

When I speak of balance of support of the various disciplines on the part of society I am considering an affluent society. The 19th-century Eskimo rightly valued highly a knowledge of the habits of the seal. He had no knowledge of French impressionism. I can afford to care more for the latter than for the former. In America we can support the activity of scholars without curtailing the consumption of beer, tobacco and cosmetics--a curtailment that I fear the scholar and his wife would resist as stoutly as anyone else. We may afford to value fields of scholarship for their intellectual attractiveness as well as for their economic worth. Although certain subjects may be basic to a liberal education, we do not know

enough to establish a hierarchy of fields for investigation or creative enterprise.

Contemporaneously, the results of intellectual achievements often were entirely hidden: Dante crystallized a dying philosophy but gave us a wonderful picture of mankind and invigorated a new language, while Newton wrote (clumsily, I am told) in a dying language but gave life to modern science. We should place our money on both the physicist and the poet.

It is the adequacy of support rather than the comparative totals that should concern us. The historian needs and should have a more expensive library than the mathematician, the physicist a more expensive instrument than the linguist; but the personal support and status (cursed word!) of all four of these scholars should be on a par. At the genius level this is now the case, but not at the level of the merely competent.

However, my chief plea is not that society should value justly the components of its intellectual life but that the individual scholar should have breadth of interest. The beauties of the universe and the power of the human mind are shown by diversity as well as by intensity. Provided he has high qualities of character and compassion, the scholar who understands the interrelations of the life of the mind is a more responsible citizen than he whose world is confined to a specialized subject. Clearly this is not a proposal to do away with specialists but merely to ask that they become and remain educated persons.

This is not easy advice and it has corollaries. There is the barrier of language. If I, a mathematician, want to know more about geology or sociology, I must master a proliferated vocabulary to make even a minor extension of my knowledge. If I want to know what the psychologist or the literary critic is doing, I must acquire a whole new set of connotations for old words. New wine in old skins gives trouble. Much as this situation needs a remedy, it is not the chief trouble. Man has shown a remarkable ability to learn words when their contents were clear and significant. Unfortunately, he has shown the ability to create words without these restrictions. More than the simplification of words, we need a simplification and a clarification of ideas. This must ever be so as new discoveries become part of our cultural heritage. It took a Bernoulli to understand Newton on Newton's own terms. But the high school student can understand a far more adequate calculus than Newton's in the terms that the Bernoullis and their ilk formulated. Most important scholars are many cuts below Newton or even the Bernoullis. Few make major discoveries. The prestige

given minor discoveries is out of proportion to the value placed on organizing and making not only clear but attractive the knowledge gained at the frontier. It is true that the speed with which a new fact becomes a new weapon is amazing; but the pace with which a new idea becomes a part of the intellectual life of the educated citizen is dangerously slow. This is only in part the fault of the citizen. Scholars should seek to give organization, style and even simplicity to the material with which they work. The scholarship of synthesis is frequently of greater value than that of discovery.

To summarize in reverse: We need scholarship that gives both structure and style to learning. We need humanists who understand the physicists, and botanists who read the poets, and all these responsibly interested in the community and its expression in government. From these interests should develop a catholicity of appreciation that will lead to a balanced intellectual life both in society at large and in its microcosm, the University.

If we live in only one intellectual cell, we live in a prison. And our comrades in other cells are also prisoners. Men must unlock the gates of knowledge and we must choose to walk freely.

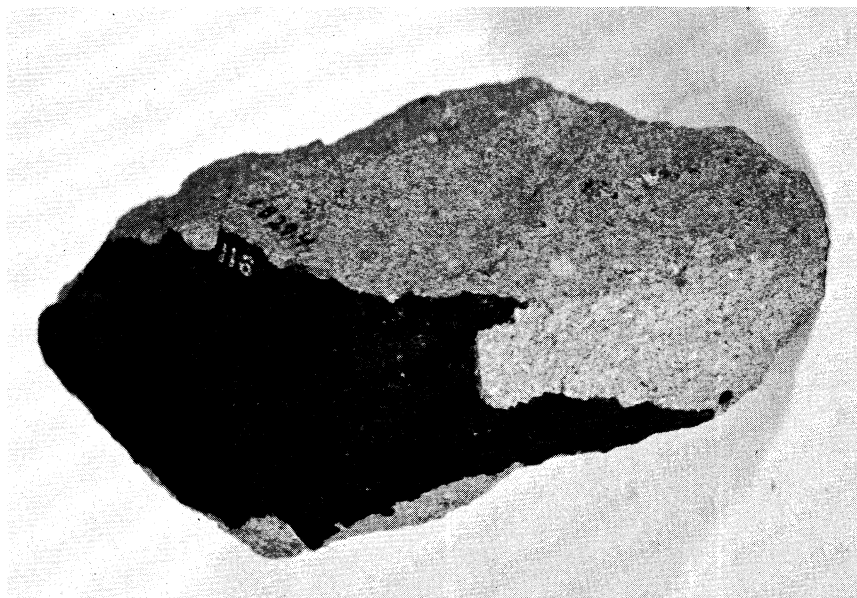
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DUTCH ELM DISEASE IN WISCONSIN: PROGRESS REPORT

By George Hafstad
Wisconsin Dept. of Agriculture

(Editor's Note: This is a selection of significant parts of a 1962 report presented by Plant Pathologist GEORGE HAFSTAD to the Wisconsin Nurserymen's Convention in Milwaukee, December 6, 1962)

This is the 1962 Dutch elm disease situation: It now occurs in 25 counties as far north as Marshfield, as far west as Lancaster. Milwaukee had some 2,000 cases, Beloit close to 700, and Madison had right around 300. What does this mean? Only that it requires definite planning and hard work to keep losses down. If Milwaukee had not practiced control measures, losses could easily be 20,000. If more careful conscientious work can be done, losses will be reduced. A cemetery in Waukesha had 38 cases in 1961, had 20 this year, 18 of which were due to root grafts, only two to beetle infection. Dutch elm disease can be controlled, but it takes work, not words. There is reason to be optimistic ... but we have many elms still standing and alive in southern Wisconsin only because of someone's toil and trouble.



Mass of Colby stone (above) and Angelica iron (below)

METEORITES

(As Seen by a Wisconsin Collector)

By Ralph N. Buckstaff

Oshkosh, Wisconsin

RALPH N. BUCKSTAFF graduated from Pratt Institute in Brooklyn, New York, where his studies in their school of decorative and applied design helped him in furniture designing for the Buckstaff Company. He was President of the company from 1930 until retiring in 1959. His wide interest in natural science has been furthered through reading and field experience. He has given his Observatory to Oshkosh State College, retaining the right to use it jointly during his lifetime. He is Observatory Director, and he has for many years been President of the Oshkosh Public Museum Board as well as Curator of the Natural History Department, and is a past president of the Academy.

Meteorites, objects coming to Earth from outer space, are of four general classes: Iron, Stony, Iron-stone and Tektites. Only within the last few years have Tektites been recognized as meteorites. They are a glassy type and their origin is in doubt. One theory is that they may come from volcanoes on the moon. However, other theories have been advanced and their origin will still have to be proven. They have been found in large quantities only in Australia and Southeast Asia. A few have been recovered in Southwestern United States, but as far as we know, none have been found in Wisconsin. The Tektites of Asia and Australia all have the same $K^{40} A^{40}$ age of 600,000 years and can reasonably be assumed to have been produced by one event.

Meteoritics is the science that deals with the study of the composition and structure of meteorites. Man's desire to conquer outer space and establish interplanetary travel makes it necessary to know the effect of cosmic rays on any object traveling in space. The study of meteorites is one of the very few sources of this knowledge known to man, as information can be obtained from them on cosmic radiation.

Rare gases, produced by cosmic rays, have been found in the Washington County



iron. The effect of these rays will have a bearing on our space travel. The Tunguska, Siberia fall was found to be the core of a comet, as no solid fragments were found in the area of the fall.

The Richardton, North Dakota fall gave us the age of the solar system. Stones from this fall were studied by Dr. John H. Reynolds, University of California. In these specimens, he found a trace of Xenon 129. This is produced by the decay of Iodine 129 and at the rate of decay of the latter material, the age of the meteorite was found to be 4,600,000,000 years. To this figure he added 350,000,000 years to get the final age of the material that made up this meteorite, making the age of the solar system about 4,950,000,000 years.

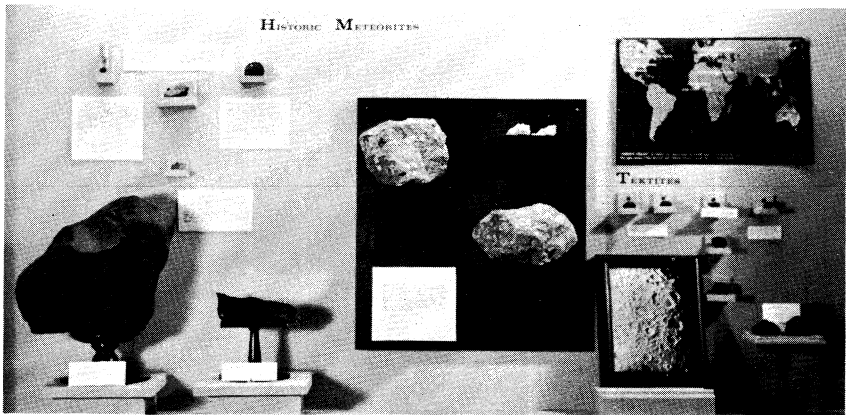
On May 14, 1864 at Orgueil, France a shower of carbonaceous chondrite stones fell. Recent studies of this meteorite show formations which look like fossil life. At present there are two schools of thought on this. Ross of the British Museum said they looked like fossil hystrichosphaeres. The objects in the Chicago samples might represent extraterrestrial pelagic protists. One group of scientists believe they are inorganic, while others claim organic origin. Dr. Harold C. Urey says the evidence of fossils is suggestive but not conclusive. We will have to await further studies.

My collection contains 132 falls and finds and 211 specimens, and is now on loan to the Oshkosh Public Museum. It is very much smaller than the larger collections in the United States but among Wisconsin ones, it probably ranks quite high. These Wisconsin meteorites are represented in the collection: Angelica 13,888 grams, Colby 1,840 grams, Kilbourn fragments, Saxeville 275 grams, Trenton 64 grams, Vernon County 53 grams.

The Milwaukee Public Museum has between 50 and 75 falls and finds and has a large amount of Colby and some large masses of the Trenton iron. The Geology Department of the University of Wisconsin has a collection comparable in falls and finds to Milwaukee. They also have nearly all of the Algoma iron.

Prof. W. F. Read of Lawrence College and Prof. W. A. Broughton of the Wisconsin Institute of Technology at Platteville are among those who are actively searching for reports or specimens to add to the small collections at those institutions.

There is no hard and fast rule to determine the value of meteorites in the field. However, some of these factors should be taken into consideration: the size of fall



A section of the meteorite display in the Oshkosh Public Museum showing historic meteorites, Richardton stone, Cumberland Falls stones, and the Tektites.

or find, type of material, structural characteristics, whether it was seen to fall, or if it was a find. Generally, irons are worth more than stones, as fewer of them are seen to fall. A meteorite which has been broken up by the owner should bring much less than a complete one and, of course, the larger the shower the less value it has. An example, 11,000 individuals were recovered from the Holbrook, Arizona shower. Prices which I paid for some of my specimens are: for a 30# iron, \$3 a pound, a 17# stone cost \$7.24 a pound (a bid price) and for a different stone I paid \$4.50 a pound. This last stone was a fall and a rare type; the owner set the price and I know it was a bargain.

WISCONSIN METEORITES

<u>Name</u>	<u>County</u>	<u>Date of Fall</u>	<u>Kind</u>	<u>Wt. in Grams</u>
	<u>Where Found</u>	<u>or Find</u>		
Algoma	Kewaunee	1887	Iron	4,000
Angelica	Shawano	1916	Iron	14,496
Colby	Clark	6:15 p.m. July 4, 1917	Stone	104,000
Hammond	St. Croix	1884	Iron	24,000
Kilbourn	Columbia	5:00 p.m. June 16, 1911	Stone	772
Belmont	Lafayette	1958	Stone	(58 lbs.)
Oshkosh	Winnebago	1961	Stone	(1/4 lb.+)
Trenton	Washington	1868-1869-1959	Iron	547,190
Vernon Co.	Vernon	9:00 a.m. March 25, 1865	Stone	700 & 800
Saxeville	Waushara	About 1894	Iron	3,600
Mount Morris	Waushara		Stone	676

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WISCONSIN METEORITE INVESTIGATIONS

By William F. Read
Dept. of Geology
Lawrence College

W. F. READ studied geology at Harvard University (B.A. 1936) and was granted a Ph.D. in geology by the University of Chicago in 1942. He taught at West Texas State College for a year before coming to Lawrence College in 1941. Prof. Read is a member of the Meteoritical Society and a consultant for the Bear Creek Mining Company.

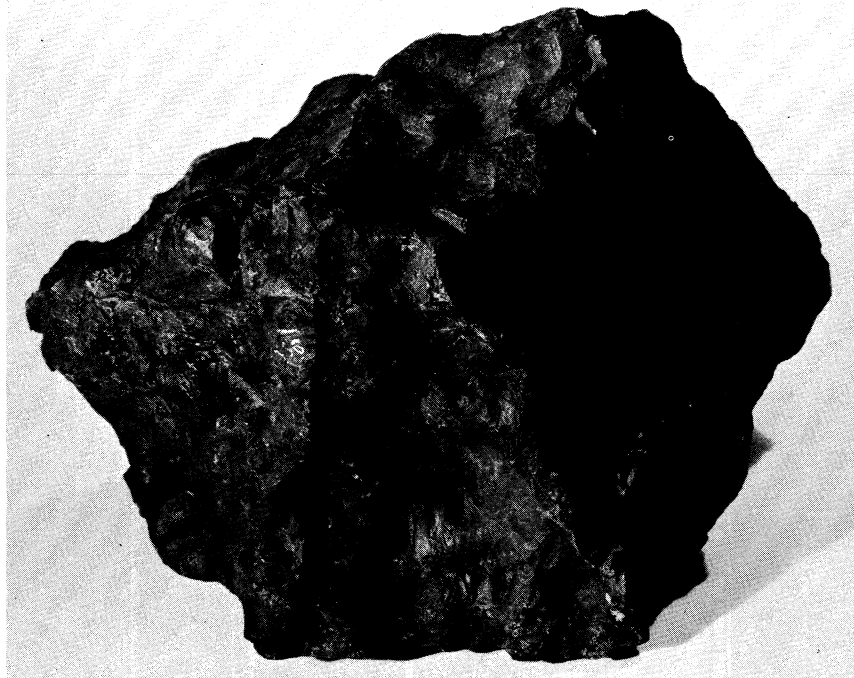
Rufus M. Bagg, Professor of Geology at Lawrence College until 1934, had remarkable natural talents as a collector. On retirement, he left to his successors an amazingly varied array of rocks, minerals, and fossils gathered personally, or by purchase and exchange, from all corners of the globe. When the old natural history museum (once housed on the top floor of our science building) fell a victim to progress, some of Doc Bagg's treasures had to go, but among other unusual items that were saved and put away was a small collection of meteorites.

These received little notice until a couple of years ago when the subject of meteorites came up in a newly-organized course on "major geologic problems." Professor Bagg's little collection was dusted off and subjected to closer scrutiny. It contained several routine purchase items from well known falls, but in addition, some sizable pieces of the Saxeville (or "Pine River"), Wisconsin meteorite plus a small complete iron--unlabelled, but presumably also from this state.

Curiosity is the weakness of the scientific mind. How much was known about these two Wisconsin specimens? What other meteorites had the state produced? How many more remained to be found? Other studies were set aside and meteorites took first place on the agenda.

It was soon learned that "Saxeville" had been first recognized as a meteorite by Bagg himself. Found about 1894, it was kept for years at a Waushara County farmhouse until a student brought it in for his geology professor to identify. Saxeville is an unusual meteorite--stone veined with iron, or possibly stony fragments in an iron matrix. Since only a few brief notes (regarding structural details of the metal) had previously appeared in print, the writer undertook a more general study, which was published in the Wisconsin Academy's TRANSACTIONS for 1960.

The "small complete iron" (about the size of a baseball) still awaits description. Records concerning its



The Hammond Meteorite

history unfortunately were lost in the destruction of the museum, but apparently it was found somewhere in Calumet County and given to Professor Bagg by a well driller.

The state has produced a number of other meteorites of which some description (in most cases, by present standards, inadequate) exists in the scientific literature. Three came from witnessed falls. About 9 a.m. on the 25th of March, 1865, a detonating fireball was observed travelling southeastward across the Mississippi River into Vernon County. Five days later, two stony fragments totalling about 3½ lbs. were found near the town of Victory. On the afternoon of June 16, 1911, a stone weighing slightly under 2 lbs. plunged through the roof of a barn about 6 miles northeast of Kilbourn - now Wisconsin Dells. Again, on the evening of July 4, 1917, a pair of stones with a combined weight of over 200 lbs. fell near the western outskirts of Colby.

Others were discovered accidentally--mainly by farmers while plowing. In 1884, the "Hammond" meteorite, an iron of 53 lbs., was found in a cornfield 3 miles



Stockwell-type metal-locating equipment built at Lawrence College.

southwest of the town from which it was named. Three years later, another iron of 9 lbs. came to light 3 miles northwest of Algoma. In 1916, or thereabouts, an iron of about 33 lbs. was plowed up 3 miles north of Angelica.

The most remarkable location for finds has been in Trenton Township, Washington County, about 5 miles southeast of West Bend. No less than 11 specimens, all from the same fall, have turned up here. The latest and most spectacular discoveries--iron masses of 413 and 527 lbs.--were made by H. O. Stockwell of Hutchinson, Kansas, using a wheelbarrow-mounted electronic metal locator.

References to the published literature on these meteorites may be found in G. T. Prior's "Catalogue of Meteorites," 2nd edition revised by M. H. Hey (1953).

In addition to those which have been "described," several others are known. The Calumet County iron collected by Professor Bagg has been mentioned. Another iron of which the main mass is now at Lawrence College is an 8-pounder found about 1957 a quarter mile northwest of Zenda. Some mystery surrounds several oxidized fragments (1½ lbs.) of a stony meteorite purchased about 1937 by Ward's Natural Science Establishment and said to have been found near Mt. Morris. Details of its history are quite unknown. Very recently (1961), two more stones were located. One (fresh-looking fragments totalling a little over 1/4 lb.) was found lying on the surface of the ground about 2 miles northwest of Oshkosh. The other, a rusty mass of 58 lbs., was turned up by a cultivator within a few miles of Belmont. The first is now at Lawrence College, and most of the second at Wisconsin State College in Platteville.

During the past two years, assisted by a grant from the National Science Foundation, the writer has been engaged in a fairly intensive effort to learn more about known Wisconsin meteorites and to discover new ones. Most of the old discovery sites have been visited, and the local residents alerted concerning possible additional

finds. Some of the iron sites have been explored with electronic detecting gear patterned after Mr. Stockwell's. A number of privately owned fragments of Colby and Saxe-ville have been successfully rounded up. Well over 100 supposed or suspected meteorites have been checked--all negative, except for the Oshkosh discovery. With a view to recovering fresh falls, reports on current fireballs have been vigorously sought.

Almost certainly there are dozens of unrecognized or unreported meteorites lying about the state. In view of the current intense scientific interest in these objects, it is important that more be found and made available for study. Any clues received from readers of this article will be deeply appreciated.

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THE BELMONT METEORITE INVESTIGATIONS

By

W. A. Broughton
Dept. of Geology, Wisconsin
State College, Platteville

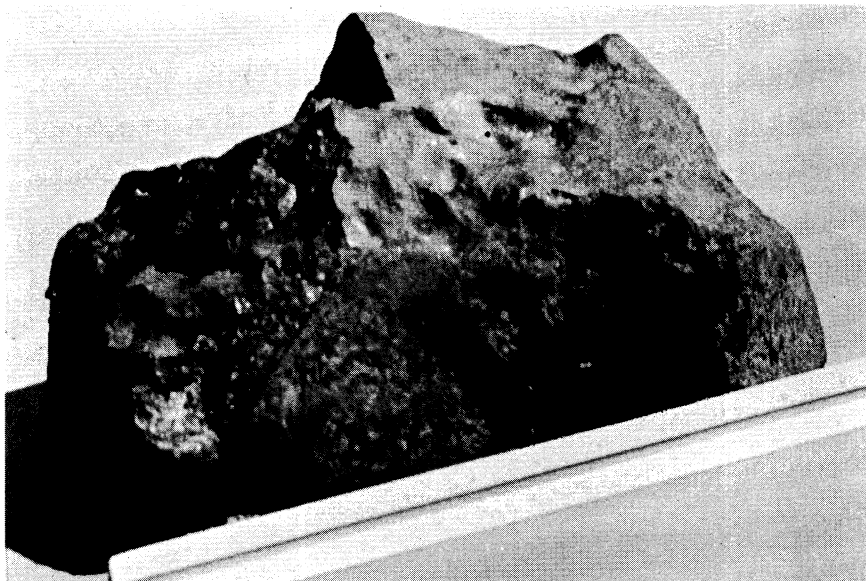
and

Lincoln LaPaz
Institute of Meteoritics
Univ. of New Mexico, Albuquerque

W. A. BROUGHTON obtained his professional training at the University of Wisconsin and was at Yale University on a Silliman fellowship for a year. He spent five years in the state of Washington as a geologist before coming to the Wisconsin Institute of Technology in 1948 to head the geology department. Prof. Broughton is also Geologist in charge of the Wisconsin Mineral Development Atlas for the Wisconsin Geological Survey. He has been assisted in his work on the Belmont meteorite by Prof. LINCOLN LA PAZ of the Institute of Meteoritics at Albuquerque.

In the Spring of 1958 a stone of unusual density and appearance was plowed up on a farm several miles east of Belmont, Lafayette county, Wisconsin. This stone, which was tentatively identified as a meteorite (by WAB) in October 1960 and was confirmed as such (by LL) in February 1961, has been named the Belmont aerolite in accordance with the convention that a meteorite is to be named for the postoffice nearest its point of discovery.

Preliminary studies of the meteorite were made at the Geology Department of the Wisconsin State College and Institute of Technology; and, in the Spring of 1961, the stone was sent to the Institute of Meteoritics of the University of New Mexico for central sectioning and detailed study. One-half of the meteorite is now on display in the Division of Technology building, Wisconsin State College and Institute of Technology, Platteville.



Half of Belmont Meteorite - Showing irregular, pitted surface (above), and polished surface--light areas and spots are metallic alloy (below).

The Belmont meteorite, when placed on scales in Platteville, weighed 58.28 pounds. The specific gravity of the gross stone was determined to be 3.56. The meteorite is of the "stony" variety, containing by weight approximately 77% silicate minerals (bronzite and olivine in about equal amounts) and 23% metallic alby (consisting of about 92% iron and 7% nickel, with small amounts of cobalt, phosphorous, and sulfur). The terrestrial age of the meteorite appears to be about 100 years.

On the basis of investigations made at the Institute of Meteoritics, the Belmont meteorite has been classified as an aerolite belonging to the small group of veined semi-crystalline spherulitic chondrites, of which the Richmond and Lumpkin aerolites are prime examples.

In January 1962 W. A. Broughton was awarded a State College Research Grant to aid in field investigations pertaining to the Belmont meteorite fall. Objectives of the field investigations are:

1. To find more pieces of the Belmont fall and to map the strewn field.
2. To find other meteorites not related to the Belmont fall.
3. To interview all persons in the southwestern Wisconsin area who have witnessed fireball activity. Eyewitness information could aid in dating the Belmont fall and in locating others.
4. To organize "sky-watchers" to report on any future fireball activity.
5. To investigate the abundance of micro-meteorites and other dusts of meteoritic origin.

The public was contacted by press and radio and encouraged to report witnessing of fireballs and knowledge of possible meteorites. Public response has been excellent and many potential specimens have been submitted (all negative, to date). Ten fireball witnesses have been interviewed from Grant, Lafayette and Green counties, Wisconsin and Clayton county, Iowa, with the fireball activity dating from 1907 to 1962. Many more public contacts will be made before investigations can be considered completed.

The area of the Belmont fall is being intensively examined for meteorite fragments. Electronic and magnetic instruments are being used as an aid. Results have been negative to date. Key personnel in the area are being instructed in "sky-watching" and reporting of fireball activity.

Soil samples for investigation of meteoritic dust deposits in the area are being taken and so far the results are encouraging.

###

FIRST METEORIC IRON "FIND" IN WISCONSIN (1868)

By Increase A. Lapham
Milwaukee, Wisconsin



Increase A. Lapham and
Trenton Meteorite

Editor's Note: The following short article by I. A. Lapham was found in his unpublished manuscripts in the State Historical Society and that institution also should be credited with preserving the accompanying photo showing Lapham inspecting the 16-pound iron meteorite which was the first of a series of valuable "finds" on a farm in the Town of Trenton, Washington county, Wisconsin (more specifically on the Korb farm in Sec. 33, T. 11 N., R. 20 E., about 30 miles NW of Milwaukee). A small part of this meteorite was given to Lapham by

the German Natural History Society in respect for his help and interest. This first specimen was described by Lapham's friend, Dr. J. Lawrence Smith (Louisville) in the *Am. Jour. of Science* (1869). Lapham then began a thorough study of the subject and a search for more specimens in the same area. His searches failed, but he was able to purchase at least two more fragments found by the farmer. In his study of the polished and etched surface of this first specimen, he discovered marks (besides the known Widmannstätten figures) not previously described and which Dr. Smith named "Laphamite Markings."

Lapham also prepared a list of 102 North American "falls" and "finds" up to 1868 described in the scientific literature with details as to location and type of material. The list (with only the Trenton specimen from Wisconsin) was never published and still is available for reference in the State Historical Society manuscript collections. During Lapham's life six pieces of the Trenton meteorite were found and he took an interest in each of them, even to the extent that he noted the 33-pound piece found by Louis Korb in 1871 was sent to M. Von Bauerbach "to be taken to Europe." The Milwaukee Public Museum has preserved the largest portion of this first 16-pound piece of the Trenton "fall" and Lapham's collection also contained small pieces - both rough and polished. His "cabinet," including other meteorite specimens also, was sold (after his death in 1875) to the University of Wisconsin

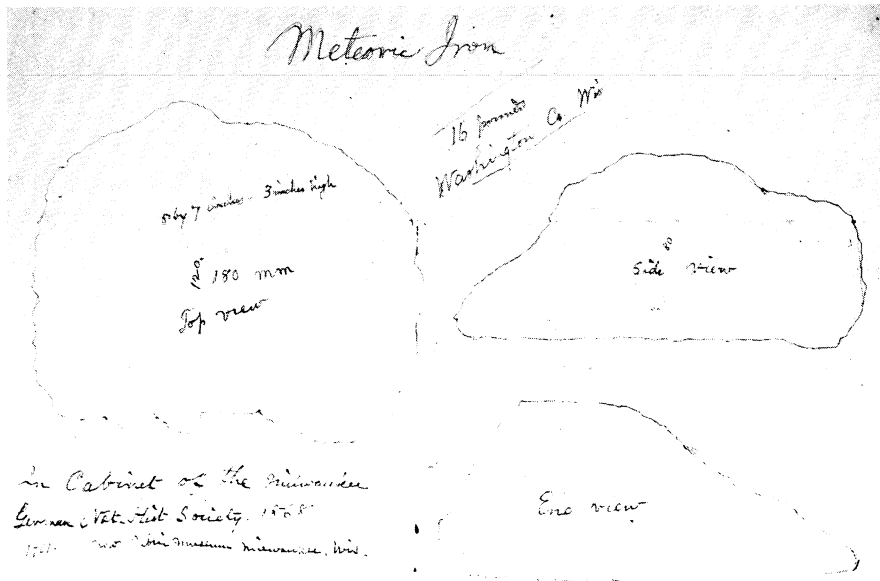
where it was destroyed in the Science Hall fire of 1884.

The following article is directly from Lapham's notes without editing for publication and the rough sketches also show his workmanship in studying a single scientific specimen. -- W. E. Scott

Meteoric Iron - A fragment of Meteoric iron has recently been discovered in Wisconsin and deposited in the cabinet of the German Natural History Society at Milwaukee in that state. It has a rudely pyramidal form the base about 5 by 7 inches - height 3 inches; Weight 16 pounds. It presents the usual pitted and irregular surface - and has probably remained some considerable time buried in the earth - the surface being considerably oxydated. (Some of these pits appear to have been filled with some mineral substance now nearly decayed and gone.) The apex of the pyramid is much nearest to one side, and has been filed off and polished to show the Widmannstätten figures, which are very regular and conspicuous. They present angles more nearly approaching the right-angle than is usual in meteoric iron, as will be seen by the accompanying figure, accurately representing a small portion of



Widmannstätten Figures
Wisconsin Aerolite
Meteoric Iron



them. The presence of nickel has been ascertained by chemical test. Other fragments are said to have been found, which have been used by blacksmiths in the neighborhood.

Portions of the specimen show evident traces of a confused cubical or slightly rhomboidal crystallization, which gives origin to the W. figures. The specimen is strongly magnetic.

A fragment cut from the interior of the mass has been analyzed by Mr. G. Bode, and found to contain

Iron	89.22
Nickel	10.79
Phosphorus	.69
Cobalt	a trace

It was entirely desolved by muriatic acid, which shows that the phosphorus was not combined as phosphuret of nickel.

This analysis shows that the Wisconsin Aerolite is the purest ever found.

###

LAPHAM COLLECTION DESTROYED BY FIRE ON DEC. 1, 1884

When fire destroyed the first Science Hall on the U.W. campus, the valuable scientific collection the state had purchased from Lapham's family was lost. The Milwaukee Evening Wisconsin on Dec. 15 commented: "It may be interesting to the people of Wisconsin to hear what they have lost. ... This collection was begun by Dr. Lapham when a mere boy at work with his father on the locks at Lockport, N.Y. It consisted of a cabinet containing fine collections of fossils, minerals, shells, meteorites and Indian antiquities--10,000 in all, besides duplicates for exchange; an herbarium of 24,000 specimens, and a library of about 1,500 books, pamphlets and maps. Among the books were many rare volumes not to be found anywhere else. ... The most active period of Dr. Lapham's collecting and exchanging was between 1830 and 1855. During this interval he made a very complete set of the plants of Wisconsin. His earlier correspondence included nearly every American botanist and a large number of foreign ones. Exchanges were arranged with most of his correspondents and no specimens were purchased. (A list of botanists with whom he exchanged specimens followed). The herbarium is especially complete in grasses and sedges, probably the result of a study of these orders in preparing his volume on the Graminae of the United States. This work, which still remains in manuscript, was begun under the direction of the United States patent office, but for some unexplained reason was summarily interrupted by the commissioner. ..."

THE KETTLE MORAINES OF EASTERN WISCONSIN

By Harvey A. Uber
Dept. of Geology
Univ. of Wisconsin-Milwaukee

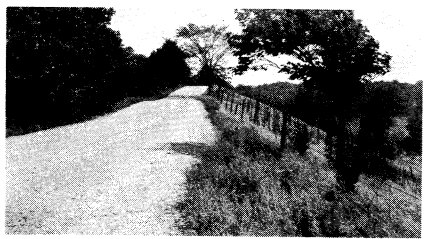
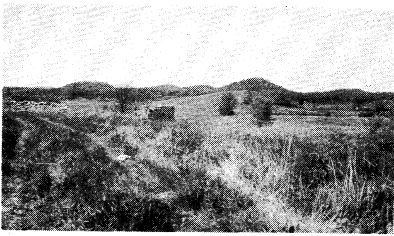
HARVEY A. UBER has been Professor of Geography at the University of Wisconsin-Milwaukee for many years. In 1937 Marquette University Press published his book, "Environmental Factors in the Development of Wisconsin," a study showing the possible relationships between geographic factors and other social phenomena in the development of the state. The following article is a recapitulation of remarks he made during the field trip by Academy members at the 1961 annual meeting when a stop was made at Lapham Peak in Waukesha county.

Origin. The kettle moraines of eastern Wisconsin are so striking in their topographic aspects that they are noticeable to the most casual observer. They are imposing features of scraggly glacial-deposited ridges brought about by the movement of the glacier during its last advance and retreat over eastern Wisconsin. During this period of glaciation there is evidence that the northern part of North America, north of the Ohio and Missouri rivers, was covered by four ice sheets of gigantic size. The one in eastern North America was the Labrador Ice Sheet; the one south of Hudson Bay, the Patrician Ice Sheet; the one west of Hudson Bay, the Keewatin Ice Sheet; and the one covering the northern part of our Cordilleras, the Cordilleran Ice Sheet. Of these it is the Labrador Ice Sheet which moved to the southwest over eastern Wisconsin and brought about the formation of the eastern kettle moraines.



--- Extent of Eastern Kettle Moraines

As the great mass of ice moved southward over eastern Wisconsin, it followed lowlands which were determined by the structure of the underlying rock layers and the gouging of these by previous glaciation. Here the underlying rock layers lie superposed one upon the other with a gentle dip to the east giving rise to a series of cuestas with their escarpments facing west and the gentle back slope trending to the east not at all unlike shingles on a roof in the reverse order. This phenomenon



Kames southwest of Parnell Tower, north Kettle Moraine area (left); and Esker or Crevasse Filling, east of Holy Hill (right).

due to differential erosion gives rise to the "eastern ridges and lowlands," one of the physiographic provinces of Wisconsin. Because of these lowlands, the ice broke up into two great lobes--the Lake Michigan Lobe, which extended over the lowland where Lake Michigan now is, and the Green Bay Lobe, which moved down the Green Bay-Lake Winnebago lowland.

As these two lobes moved southward, they also spread out laterally so that the western side of the Lake Michigan Lobe pushed against the eastern side of the Green Bay Lobe. The lateral movement of the ice not only caused great masses of debris to be pushed up between the lobes, but also caused prongs of ice to project from one lobe into the other, burying themselves deeply in the accumulated debris. When the ice melted away, this gave rise to an interlobate moraine of scraggly ridges and depressions, the longer depressions being formed by the valleys between the moraines and the more rounded ones by the melting of the buried ice blocks.

Those made by the melting of the buried ice blocks are scattered promiscuously between rounded domes, conical hills, sharp spurs and knolls of the interlobate moraine. They have given rise to such descriptive names in Wisconsin as "kettles," "potash kettles," "pot holes," "pots and kettles," and "sinks," and are the reason for the naming of the interlobate moraine, "kettle moraine."

Kettles. Many of the kettles are circular in outline, similar in shape to the utensil from which they got their name. Sometimes they have the shape of a funnel, or an inverted bell, while shallower ones may be saucer-like. Still others may depart from the rounded form and extend into trough-like or winding hollows. In depth they may vary from mere indentations to hollows sixty or more feet deep, while in irregular forms, the depth is sometimes more than one hundred feet. The slope of their sides is as steep as the debris will lie, often reaching

an angle of thirty-five degrees. The average horizontal dimension is seldom more than five hundred feet although some are much longer.

Associated Features

Kames. As a counterpart to the kettles there are the rounded hills that may not wrongly be styled inverted kettles. These are "kames" or hills of stratified sand and gravel which commonly rise conspicuously from fifty to one hundred or more feet above the surrounding terrain. They exist as isolated hills or in small groups. Where they are grouped, deep kettles occur between them, giving rise to "knob and kettle" topography. These rounded hills or knobs were formed at the margin of the glacier by debris-laden streams where they heaped up their load as they emerged from the ice.

The kettles and kames, however, are secondary elements on the moraine because they are widely distributed over its surface. They are in greatest abundance on the steeper side of the moraine but do occur on both sides of it and infrequently are distributed over level areas adjacent. Kame-like deposits are even found in some places on top of the moraines.

Lakes. In many of the hollows of the kettle moraine and those of adjacent areas are small lakes. Some of these distinctly are more or less rounded kettles with neither visible inlet nor an outlet and receive and lose their water by seepage. Others are elongated blocked valleys between the moraines and are part of a drainage system. Another type is the elongated blocked valley with pitted basins caused by the melting blocks of ice which were embedded in the valley bottom. Some of the more irregularly shaped lakes also have basins of several pits caused by the melting of blocks of ice. The lakes with the pitted basins usually have steeply sloping sides and great depths for small bodies of water, some being more than one hundred feet deep.

Eskers. Other strange features of glaciation found scattered widely in the kettle moraine area are winding ridges of stratified sand and gravel known as "eskers." These are sometimes wrongly called "hogbacks" by the people in their locality. They were formed by the deposition from heavily loaded streams in crevasses in the ice or in tunnels under the ice. To preserve their form it was necessary for the ice to retreat rapidly off of the area, otherwise its forward motion would have destroyed their form.

In many places the eskers are low broad ridges of well stratified sand and gravel which usually trend parallel to the moraine ridges and give to the area between

the ridges a swell and swale topography. It would seem as though this, however, is a kame-like deposit made by water as it tumbled into and along a large north-south crevasse in the ice making a long deposit as though low kames were piggy-backing each other.

Drainage. The eastern kettle moraine area is drained by several rivers, some of which flow into Lake Michigan, while others that are tributaries of the Fox river (Pish-taka) and Rock river finally empty their waters into the Mississippi river. The Sheboygan river at the north end of the kettle moraine first drains an area of the Green Bay Lobe ground moraine to the west. Then it cuts across the kettle moraine at Kiel where it drains the Sheboygan marsh, a former lake, and Elkhart lake, the basin of which consists of two kettle holes. After crossing the kettle moraine, the Sheboygan river flows eastward across the ground moraine and terminal moraines of the Lake Michigan Lobe to empty into Lake Michigan at Sheboygan.

The Mullet river to the south is very similar in its behavior in that it first drains an area of the Green Bay Lobe ground moraine to the west of the kettle moraine, then cuts across the kettle moraine at Greenbush to flow across the ground moraine of the Lake Michigan Lobe and become a tributary of the Sheboygan river west of Sheboygan. Since both these streams flow perpendicularly across the kettle moraines, it is evident that their courses are not controlled by surface features but by the underlying rock layers which here, as mentioned before, are cuesta-makers and tilt gently to the east.

The area southward as far as West Bend is drained by branches of the Milwaukee river both on the east and west sides of the kettle moraines. In the eastern area are included Long lake, Mauthe lake, Big and Little Cedar lakes

and Silver lake. Both Long lake and Big Cedar lake are the result of damming back the river in valleys between the moraines which here run parallel to each other. The other lakes of the area are kettle holes which receive and lose water by seepage.



Moraine north of Lapham Tower, Delafield area; Nagawicka lake to left.

The area to the west of the kettle moraine and extending from Kewaskum as far to the north as the Mullet river is also drained by the Milwaukee river. Here the river and its tributaries first flow to the south across the ground moraine of the Green Bay Lobe and then at Kewaskum and as far to the south as West Bend cut across the kettle moraines to become a part of the eastern Milwaukee river. The fact that the Milwaukee river, like the Sheboygan and Mullet rivers, drains contrary to surface features, indicates that its course is also controlled by the structure of underlying rock layers which tilt to the east.

All other areas to the west of the kettle moraines are a part of the ground moraine of the Green Bay Lobe and are drained by the Rock river and its tributaries. The many lakes of the Oconomowoc area, except Pewaukee lake, are pits which owe their origin to the melting of buried blocks of ice and get or lose water by seepage, or directly are a part of the Oconomowoc or Bark rivers which flow into the Rock river. The large swampy areas to the south and the many ponds are all remnants of larger lakes which drained westward into the Bark and Scuppernong rivers and then into the Rock river. The Whitewater lakes, both natural and artificial, at the extreme southern extremity of the moraine are drained by the Whitewater creek which flows northward into the Bark river.

To the south and on the east side of the moraine are Pewaukee lake and Lauderdale-Beulah lakes. Pewaukee lake is a pre-glacial erosion valley blocked at its west end by stratified drift and the Lauderdale-Beulah lakes, with their irregular or rounded shapes on the pitted moraine to the south, have almost all of them been formed by burial and later melting away of irregular blocks of ice. Both are drained by the southern Fox river (Pishtaka) which is a part of the Illinois-Mississippi river system.

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NOTICE: We regret to announce the recent death of the following Wisconsin Academy members and hope to publish in Memoriam statements about them in immediately forthcoming issues of the Wisconsin Academy Review:

Mrs. A. W. SCHORGER (Madison)
Professor RUTH WALKER (Milwaukee)
Professor PAUL ERRINGTON (Ames, Iowa)
RAY HUSSONG (Green Bay)
D. J. STEWART (Rockford, Illinois)
Professor STANLEY A. TYLER (Madison)

ODIC ODDITY

*(Multum in Parvo)*In amaze,Lost I gazeCan our eyesReach thy size?

--Alexander Pope

Ode to the Hero of
 "Gulliver's Travels"
 (Supposedly written
 by the Poet Laureate
 of Lilliput.)

* * * * *



Aldren Watson

PILGRIMAGE

To Witter Bynner - Poet in Retirement at Santa Fe¹

They claim you as their peer, themselves your kin,
 Those Makers of old artifacts that you
 For close companionings have gathered-in
 To home them, even as heart will have its due:

Quaint lantern from Cathay, your lyric zone;
 Exotic screen; rich lacquered art design...
 And echoing now from Taurus, tarn and tone
 In your translation line by antique line...

And speaking images from your study walls
 --Personage after personage (heart, once more)
 Re-telling fondly what the spirit recalls
 Between friends old...too old... --Mute not your score;
No music miss upon that desert air;
And Iphigenia's grief still gently bear...

---Ralph Alan McCanse

The Literary Editor of the Academy Review has penned a heart-felt sonnet to a fellow poet, Witter Bynner--dramatist and translator of Chinese poems and Greek drama.

HISTORY AND PROGRESS IN SOIL SURVEY IN WISCONSIN

By Francis D. Hole

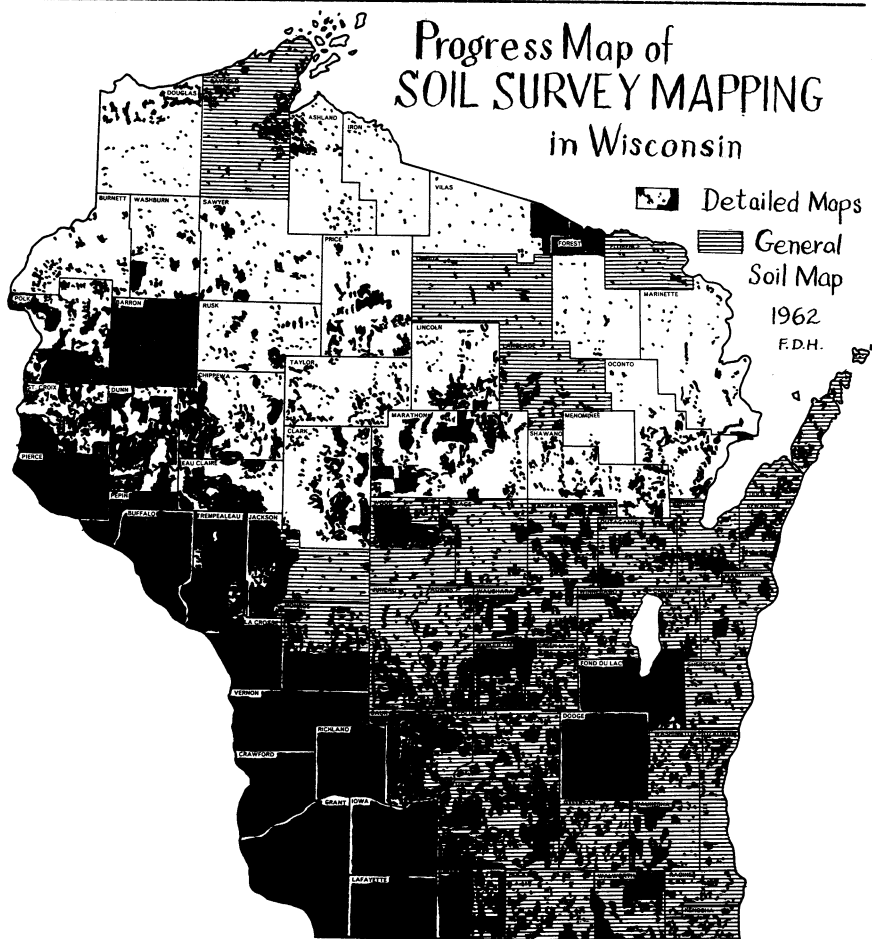
Dept. of Soils, University of Wisconsin

In 1882 the first soil map of Wisconsin was published under the direction of T. C. Chamberlin as a part of the first geological survey of the state. Soil mapping in Wisconsin has continued with increasing precision since 1909. Soil survey work by the Geological and Natural History Survey, the Soils Department at the University of Wisconsin, and the Soil Conservation Service of the U. S. Department of Agriculture is coordinated. The accompanying index map shows areas covered by detailed maps (two inches or more per mile) and detailed-reconnaissance maps (at about one inch per mile).

In a sense the pioneer work in soil survey in Wisconsin was begun at a meeting of the Wisconsin Academy of Sciences, Arts and Letters on December 27, 1893, when a committee chaired by C. R. VanHise was appointed to secure legislation establishing a geological and natural history survey. This became a reality in 1897, when the Survey was created to study mineral resources, soils, plants, animals, physical geography, natural history, and to do topographic mapping. Under Directors E. A. Birge (1897-1918), W. O. Hotchkiss (1918-1924), E. F. Bean (1924-1953) and George Hanson (1953 to date) the soil mapping program of the Wisconsin Geological and Natural History Survey has moved forward in response to the legislative directive "to cause a soil survey and a soil map of the state" to be prepared.

The federal soil survey began in 1899 and thereafter soil survey in the nation became cooperative between the U.S.D.A. and state agencies. Soil scientists from the U. S. soil survey have come regularly over the years to Wisconsin to correlate soil classification in this state with that in other states.

Professor A. R. Whitson of the Soils Department of the College of Agriculture was in charge of the Soil Survey Division of the Wisconsin Geological and Natural History Survey from 1909-1933. During this period, under the field leadership of W. J. Geib, a number of general soil maps of the northern half of the state were published (not shown in the index map of this issue), as well as detailed-reconnaissance maps of the state (1926). The U. S. soil survey carried on work cooperatively at the same time and a number of soil maps and bulletins were published by the Government.



In the 1930's state funds for soil survey lapsed, but the U. S. Bureau of Soils, and later the U. S. Bureau of Plant Industry and the U. S. Soil Conservation Service carried on soil mapping, particularly in southwestern Wisconsin where soil erosion control was most needed, but did not publish the maps. In 1945 the Soil Survey Division of the Geological and Natural History Survey was reactivated, largely by the efforts of State Geologist Ernest F. Bean, and Professors Emil Truog and R. J. Muckenhirn of the College of Agriculture. Field work under the program was then directed to detailed soil surveys for farm planning and soil conservation to assist the Soil Conservation Service. The Geological and Natural History survey also resumed publication of semi-detailed county soil maps to fill serious gaps in coverage of the

state. Detailed soil survey reports accompany the maps to describe and scientifically characterize the soils, present pertinent research data and indicate potentialities of soils.

In 1952 the Soil Conservation Service began publication of detailed soil maps for counties in Wisconsin, along with reports useful for farm planning and erosion control work. The resulting detailed maps shown on the accompanying map were done by Wisconsin soil scientists under the administration of the late M. F. Schweers, State Conservationist (1942-1962), and under the technical direction of State Soil Scientists T. C. Bass (1942-1946), William DeYoung (1946-1960) and A. J. Klingelhoets (1960 to date).

A soil map is the product of the efforts of a team of field scientists who dig numerous holes for examination and sampling, of laboratory technicians who analyze soil samples, of cartographers who draw the final maps for publication in color or on aerial photographic base, and of editors who prepare illustrated reports to explain the characteristics and potentialities of the soils. A soil map is an inventory of a basic natural resource. General soil maps are useful in planning on county, regional and state scales. Detailed soil maps are essential in planning land use on farms, woodland tracts, conservation and recreational lands, and growing urban areas. Soil maps and soil survey reports are proving increasingly useful to builders, highway engineers, sanitary engineers, flood control specialists and geologists, among others.

Soil maps of individual farms can be consulted at Soil Conservation Service offices, usually at county seats. Colored soil maps for more than half of the Wisconsin counties are available from the Geological and Natural History Survey at the University of Wisconsin, Madison 6, along with soil survey reports. A list of these publications can be obtained from the Soil Survey Division, Soils Building, University of Wisconsin, Madison.

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Editor's Note: Professor F. D. HOLE is in Charge of the Soil Survey Division of the Wisconsin Geological and Natural History Survey. He also is Secretary-Treasurer and Chairman of the editorial committee which produces the quarterly Soil Survey Horizons for a "publication corporation" by that name. The back cover map on "Wisconsin Bedrock Geology" was also prepared by him.

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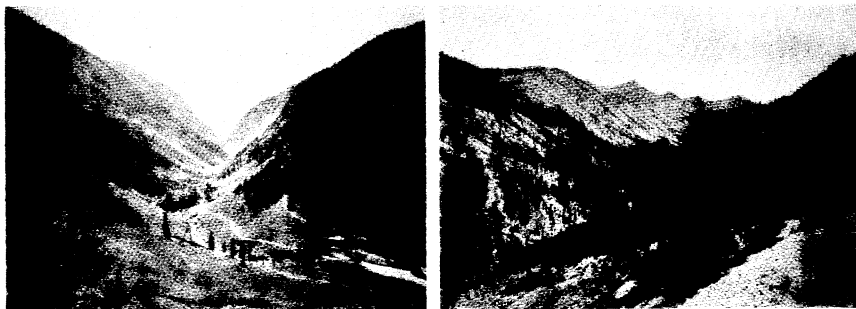
GLACIATION IN THE MISSISSIPPI GORGE

By Robert Bailey
Sarona, Wisconsin

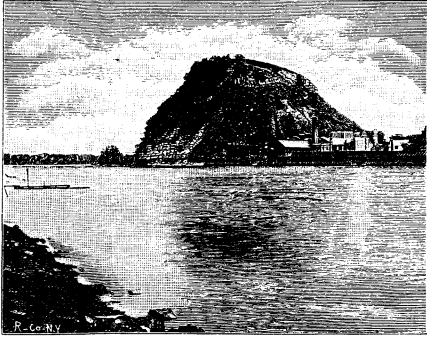
The most striking feature of the Mississippi Gorge between Alma and Prairie du Chien is the precipitous squared-off ends of the bluffs. Some people have described it as fjordlike. There is much controversy among geologists as to the actual cause. Most authorities have ascribed it to the erosion of glacial torrents. Also, there have been suggestions that the condition is due to faulting, and a few geologists insist that it is due to glacial abrasion.

The latter seems to be the most plausible explanation, for moving ice is the only agent that abrades the tips of valley bluffs, and leaves the interior slopes unchanged. These interior slopes are the typical V-shaped slopes of normal erosion, unchanged except for a mantle of loess, while the tips of the bluffs have the U profile typical of glacial valley erosion. Another likely result of valley ice is the fact that the heavy mantle of loess along the valley decreases in thickness and becomes finer in texture with distance from the river.

While the extreme advance of the ice is marked on Lawrence Martin's maps (in A Physical Geography of Wisconsin) as extending directly down from the highlands and across the Mississippi Gorge such a pattern is most unrealistic. Ice advance generally is assumed to be a direct product of ice depth, and if we assume a minimum depth of 200 feet on the highlands, the ice in the valley would have had a depth of at least 800 feet. Ice to that depth would, under unfavorable conditions, have advanced at least 15 miles beyond that on the highlands, while



A V-shaped valley made by stream erosion (left), and a mountain valley eroded into a U-shape by valley glaciers.



Barn Bluff near Red Wing

under favorable conditions the advance could have been a hundred miles or more.

Depth of ice is but one of the factors that contribute to the movement of ice. The second factor (and just as important), is ice temperature and the temperature of the ground over which the ice is advancing. Ice at $+32^{\circ}$ F. is rather ductile, but as temperatures decrease, ice becomes increasingly hard and unyielding. We who live in areas of cold

winters well know how the snow at 0° complains underfoot because of the crystals grating together, while at thawing temperatures we say the snow is "soft" and readily yields. Such temperatures were a decided factor in sleigh hauling. At 0° F. a sleigh on snow had to be hauled down a 7% grade, but at $+32^{\circ}$ F. a $\frac{1}{2}$ % grade will coast a load.

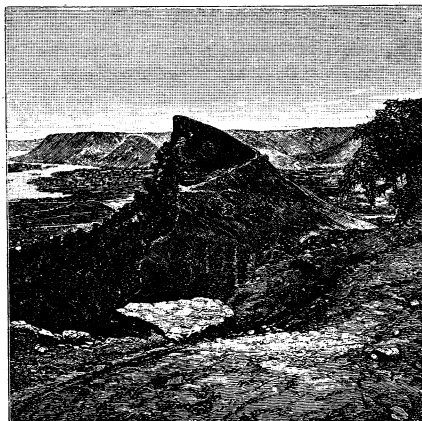
So with glaciers, there would be a great difference in ice movement over unfrozen flat silt terrain, or ice advancing over rocky permafrost. Ice movement would be most rapid in the case of ice at the melting point advancing over a warm silt type soil. The combination of melting ice and slippery clay would tend to expedite the flow of the ice, leaving behind much of the lower ice and earthy material. It well could be called "the hot griddle" effect, as when a chunk of lard advancing over a hot skillet leaves its lower substance behind. The other extreme would be extremely cold ice advancing over permafrost. It would be a so-called dirty glacier, for instead of sliding, it would be in part a rolling action, adhering to, and plucking, and ingesting the loose material in its path.

This probably was the case with glaciation in Wisconsin. The first period was about 35,000 years ago, according to the carbon 14 datings of Professor Robert Black of the University of Wisconsin. This apparently was a warm glacier--at least, as warm as glaciers get. Its slump profile was flat, much like the Malispinia Glacier of today. It appears to have been the product of a wet cool maritime climate. Its advance was rapid. Because it was clean, it left little of moraine, or outwash. Also, because of the dearth of transported material, this stage appears to be older than it actually is.

The Early Wisconsin stage (known as Cary) retreated,

and was followed by a cold continental type climate, which was in turn followed by a glacial advance generally known as the Tazewell Stage. This was a slow moving, deep and dirty continental type of glacier. It was slow in accumulation because its advance over the permafrost was more of a rolling and plucking motion, rather than the well oiled gliding motion of its predecessor. The result was a slump profile far steeper than that of the earlier stage of glaciation, and a glaciated area that is well defined with moraine and outwash.

The difference in ice slope is well illustrated by comparison of the glaciation in the vicinity of Willard, Wisconsin with that of the later stage in Barron Hills and the Baraboo Bluffs. At Willard, North Mound and South Mound (340 feet high) were not overridden by the ice, even though it extended 15 miles to the south. If one assumes an ice face of 200 feet, the slope of the glacier was only 15 feet to the mile. On the other hand, an embayment of six miles in the Tazewell Stage around the Barron Hills had a difference in elevation of 600 feet. Evidently the slope of this ice was at least 50 feet to the mile.



"Sugar Loaf" near Winona

In the case of the Mississippi Valley, the greater depth of ice, the unconsolidated material in the river bottom, and the buoyant action of the runoff in the blind valleys would have favored rapid movement of the ice. The slope of the ice could have been as low as five feet to the mile, which would account for evidence of ice action to the south of Prairie du Chien.

It is a matter of conjecture, but those who thought the valley as fjordlike may have been right in fact, as well as in description of its appearance.

The above paper is abbreviated from the presentation made at the 92nd Annual Meeting of the Academy at La Crosse, May 4, 1962. Mr. Bailey operates a dairy and tree farm.

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LOUIS E. WISE RECEIVES PAYEN AWARD



LOUIS E. WISE, internationally known wood chemistry scientist and a senior research associate at the Institute of Paper Chemistry at Appleton, has been presented the first Anselme Payen Award. This newly created recognition was established by the Cellulose, Wood, and Fiber Chemistry Division of the American Chemical Society earlier this year "to honor and to encourage outstanding professional contributions to the science and chemical technology of cellulose and its allied products." Payen was a French industrialist and professor of industrial and agricultural chemistry and was the first to separate wood into its component parts.

The Award medal and a \$1000 award were presented at the Division's 40th anniversary dinner in September. Prof. Wise has been on the faculty of the graduate school of the Institute of Paper Chemistry since 1941 and on its scientific research staff. Formerly he was associated with Columbia University (from where he earned the Ph.D. degree), the University of Missouri, the Syracuse College of Forestry and Rollins College. He has also worked with the U.S.D.A. and the War Department and with the Du Pont Company. A two-volume standard text on "Wood Chemistry," which he prepared and edited with Prof. Edwin Jahn of the College of Forestry, has been translated into the Russian recently. He has been author or co-author of more than 125 publications on cellulose and wood chemistry over the past half century. In 1960 he received the Gold Medal of the Technical Association of the Pulp and Paper Industry. He is a member of several professional organizations as well as of Phi Beta Kappa, and is a Fellow of the American Association for the Advancement of Science.--Adapted from The Paper Industry, Sept. 1962

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SAGE RANCH A "SHOW PLACE"

The Summer 1956 Academy Review announced the retirement of CHARLES H. SAGE from the Kimberly-Clark Company, Neenah. He has since devoted his time to his ranch in the Salinas Valley of California and it is known as a "show place" which is efficiently managed and stocked with prize-winning horses and cattle, and its operation is being watched and emulated by other stockmen. Mr. Sage continues his interest in Wisconsin also, and is a director of the Forest History Society headquartered at St. Paul.

A NOTE ON THE COVER

The model illustrates a proposed design treatment for a portion of a twelve-block mass of the city of Milwaukee. This area, bounded by Center to Locust and Hadley to Humboldt streets, is currently under consideration for federal funds in order to conserve and enrich the environment. Based on the development of a natural neighborhood, the plan is to demonstrate how a fusion of the arts--architecture, advertising design, creative lighting, landscaping and sculpture--can assist in rejuvenating a segment of the city. The intended safeguarding of property values, in combatting blight, is based on retaining the most effective characteristics of the existing neighborhood. Modifications in street and sidewalk usage are advanced as means of solving the problems of traffic flow and parking in a visually intriguing manner. If achieved, this endeavor should extend new possibilities for living in this northeastern segment of Milwaukee.

Supported by a grant from the University of Wisconsin's Urban Program (Ford Foundation) the plan has been originated by the following individuals:

Karl Giehl - Artist-Craftsman
 Edward Green - Staff Artist, Milwaukee Public Museum
 Genesio Simotti - Landscape Architect
 William P. Wenzler - Architect

and two University Professors:

Martin Cohnstaedt - Urban Sociologist
 James Schinneller - Art Education Extension

They are being assisted in carrying forth this Urban Conservation Project by a number of appropriate University and municipal officials.

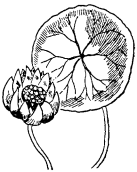
---James Schinneller

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THE UNIVERSITY OF WISCONSIN LOTUS BED

By Andrew W. Hopkins
 Prof. Emer. Agricultural Journalism
 University of Wisconsin

The American Lotus bed near the eastern shore of University Bay again this year staged a brilliant showing of bright yellow blooms set in the midst of giant lily leaves. As always when the plantation has been in bloom, it has won admiration of flower lovers and of visitors who have taken the time to find the bed in the nook between Artists' Point and the bridge at the base of Willow Drive.



Far too little may generally be known about the origin of this interesting and spectacular wild flower feature. Sometime in the early twenties Dean H. L. Russell came upon a newspaper item reporting that strange but strikingly beautiful water plants had taken over the entire area of a small pond northeast of Janesville. With the aid of the late Clyde Terrell, then proprietor of the Terrell Aquatic Gardens near Oshkosh, and Franz Aust, an experienced specialist in landscaping, Dean Russell scouted the area. The following September, with the permission of the owner, they collected tubers and seed of the plants. These were planted in locations thought to be favorable for growth of the plants. A. F. Gallistel, then Superintendent of University Grounds, also joined in the enterprise.

Learning of the project, Magnus Swenson, always interested in plant life, offered to establish a two-year fellowship in the University to enable a study to be made of the plant. Called

American Lotus by laymen, it is known to botanists as Water Chinquapin or Yellow Nelumbo. William Meyer, the graduate student appointed to the Swenson Fellowship, at the completion of his studies prepared a report on "The Life Cycle of the Water Chinquapin and Methods of Establishing it in Favorable Waters." The research studies indicate that the apparent disappearances and reappearances of the plantation might be due to two main causes: 1) destruction by overpopulation of muskrats in or near the plantations, and 2) disease of the tubers when they become overcrowded. In University Bay too the colorful plants have had a habit of reappearing after an absence during which we missed their cheerful faces. We do well, when at times we enjoy the gorgeous splurge of yellow in the nook on the Bay, to remind ourselves that for our enjoyment we are deeply indebted to some who cared and who continually sought to beautify and to enrich the campus.

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FRIENDS OF THE ARBORETUM ORGANIZED

By Walter E. Scott

On October 14, 1962 about two hundred friends of the University of Wisconsin Arboretum - and of the late ecology Professor JOHN T. CURTIS - attended an impressive ceremony there.



Former students and a colleague of John Curtis at the dedication ceremonies. Standing (l to r) Forest Stearns, Grant Cottam, Robert McIntosh, Prof. Henry Greene, Edward Cawley, Orie Loucks, Russell Wagner; kneeling, David Archbald, Max Partch, Ben Wagner.

The principal Arboretum prairie of 60 acres adjacent to the Leopold Pines was dedicated as a memorial to Professor Curtis. A native glacial boulder found on this prairie was inscribed as shown on the photograph on the preceding page. Dedication speeches were presented by former students, Professor GRANT COTTAM and Professor ROBERT P. McINTOSH of Notre Dame University.

After the ceremonies, Friends of the Arboretum was organized with UW Vice-president A. W. PETERSON as President, LOWELL FRAUTSCHI as Vice-president and Mrs. John T. Curtis as Secretary-Treasurer. A Board of Directors includes these officers (except the Sec'y-Treas.), Mrs. Bentley Courtenay, Mrs. William Sachse, and Mrs. A. C. Garnett, and Messrs. A. F. Gallistel, Arthur Towell and Benjamin W. Huiskamp. An Advisory Committee consists of Professors J. H. Beuscher, David Archbald, Grant Cottam, and G. William Longenecker--the latter two members of the Academy. As of last November 8 the group already had 180 members.

Membership in this non-profit, non-political organization is open to anyone with an interest in preserving this valuable scientific study area. The group's purposes are as follows:

1. To provide a means of financing, through gifts and grants, expanding and enhanced Arboretum functions which will improve facilities for public utilization and for research and instruction.
2. Financing collection of plants from other parts of the United States to expand and enhance the value of Arboretum plant communities.
3. Marking of trails and preparation of trail guides for the public's convenience.
4. Providing matching funds for construction of a research building and auditorium.
5. Preparation of exhibits of general public interest.
6. Publication of a nontechnical bulletin concerning scientific, instructional, and historical aspects of Arboretum activities of general interest.
7. Providing a means for protecting the Arboretum from encroaching highways.
8. Providing an organization to protect the Arboretum from the periodic proposals that town roads be cut through the Arboretum.
9. To protect the Arboretum from requests for space for electric, gas, water, and sewer lines.
10. Providing an organization to protect the Arboretum from the periodic attempts to utilize the area for a real estate subdivision.
11. Providing a means for expanding utilization of the Arboretum for education of the public in conservation, nature study, and scientific research.

Anyone wishing to affiliate should make their checks payable to the "University of Wisconsin Foundation--Arboretum" and mail them to Mrs. Curtis at 329 Birge Hall, U.W., Madison 6. Annual membership categories are: Active, \$5, Sustaining \$15, and Supporting, \$25. For \$100 or more a Life membership can be secured. Contributions are income tax deductible.

The informal photo of Professor Curtis used with this article was taken on a field trip of the State Board for the Preservation of Scientific Areas on which he served as chairman for many years. Others with him in this group picture were C. L. Harrington, Albert M. Fuller, Alvin Throne and Carl Welty. Attention also is called to an article by Professor Robert A. McCabe about "The University of Wisconsin Arboretum" in the Winter, 1960 Academy Review.



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NOTICE: For security reasons, all U.W. Arboretum parking lots now are being closed every evening at 10:00 p.m. and opened again at 7:30 a.m. During bird migration season it is planned to open at least one parking lot at daybreak. Access to parking facilities outside these hours can be arranged by contacting any member of the Arboretum staff.



THE BOOKSHELF

THE ARCHAEOLOGY OF CARCAJOU POINT

By Robert L. Hall

University of Wisconsin Press
430 Sterling Ct., Madison 6
1962 2 vols. \$8.00

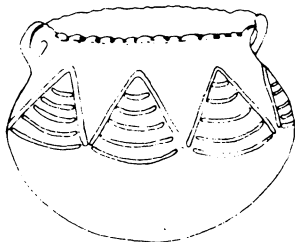
(Vol. 1, Pp. 200 Appendixes, bibliography, index; Vol. 2, Pp. xi, 148. Illustrations, tables.) With an Interpretation of the Development of Oneota Culture in Wisconsin.

The Archeology of Carcajou Point is a book which deals with one particular phase of Wisconsin's prehistory, the development of the Oneota Aspect which in its latest expression is identified as the culture of historic Siouan speaking groups, the Winnebago and Chiwere Sioux (Iowa, Oto, and Missouri). The excavations at Carcajou Point on Lake Koshkonong in Jefferson County were carried out in 1957 by the author, Robert L. Hall. Carcajou Point is a revision of Hall's PhD dissertation at the University of Wisconsin.

It was known prior to Hall's excavation that Carcajou Point was the site of the early 19th century village of White Crow, a Winnebago Indian. Collections from the surface of the site included historic trade goods (beads, gun parts, brass kettle fragments) and aboriginal pottery and chipped stone artifacts. Hall started excavation with the intent of defining this late culture of the Winnebago. However, little was found of the White Crow occupation and much more relating to a prehistoric occupation of the site, dated by radio carbon as some 800 years prior to the White Crow village.

The prehistoric artifacts, classified as belonging to the Oneota culture, were of such a nature that Hall was able to define three phases within the Oneota tradition: emergent, developmental, and classic. At Carcajou Point the two former phases are best represented.

For many years archeologists in the midwest area theorized that Oneota grew out of Middle Mississippi, a culture seen in Wisconsin at the village of Aztalan. Excavations at Carcajou Point give graphic proof to this theory for not only did Hall find Oneota pottery with designs and vessel shape reminiscent of Middle Mississippi, but also in association with such pottery, a wall trench house, a house type characteristic of Middle Mississippi. These are characteristic of the earliest occupation at Carcajou; such attentated Middle Mississippi



traits composing the emergent phase of Oneota. Hall feels that Carcajou Point was first occupied by a group already moving away from Middle Mississippi culture. While the bearers of an emergent Oneota culture could have come from a site such as Aztalan, Hall feels that the Indians at Aztalan may not have contributed directly to the development of Oneota culture. There is not enough archeological evidence at this time to pinpoint the site, sites, or area of Oneota emergence.

Developmental Oneota is defined as the phase in which artifacts become more like classic Oneota as found in sites identified as Iowa, Oto, etc. It is primarily through pottery that Hall classifies his phases. Unfortunately other artifacts, stone tools for example, were so scarce at Carcajou Point that little could be done with them beyond description. Much of the comparison between phases of Oneota and between Oneota and other late prehistoric occupations is done on the basis of pottery and types of design.

A brief account of the known history of the Winnebago tribe in Wisconsin is given. From historic records Hall projects back into the prehistory to suggest that various archeological expressions of Oneota indicate the linguistic and tribal division between the Winnebago and Chiwere Sioux. He feels that the early phase at Carcajou Point may be an early expression of Winnebago culture "making Carcajou Point the location of one of the earliest as well as one of the last Winnebago villages in southern Wisconsin."

Carcajou Point will provide a practical background (in terms of pottery description) and a theoretical framework for further investigation of Oneota in Wisconsin. Certainly this book does not and can not at this time answer all the questions concerning the development of Oneota culture.

Since much of the book is concerned with pottery, descriptions and comparisons, so valuable for the archeologist, it may overwhelm the non-archeologist. In his discussion of the Mid-west Taxinomic method, where terms such as Middle Mississippi and Oneota are defined, Hall presents a good discussion of what is known of the later archeological cultures in Wisconsin. The bibliography is excellent as is the list of pottery types defined for Wisconsin. The book is in two volumes, the first the text, and the second the illustrations and tables, which are spiral bound. This is a most convenient arrangement since illustrations can easily be consulted in conjunction with the text. The University of Wisconsin Press is to be congratulated on this arrangement. -- Joan E. Freeman, Curator of Anthropology, State Historical Society of Wisconsin

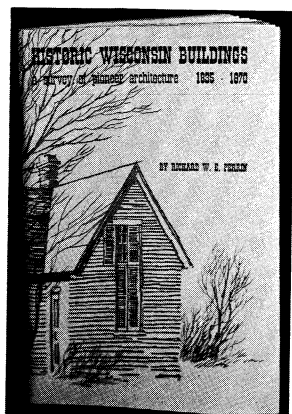
A CHRISTMAS CHICKADEE
By Alvin M. Peterson

Available from the Author
931 Green Bay st., Onalaska, Wis.
1962 \$1.00 hard cover, 60¢ paper

This children's book relates a boy's experiences in learning how to attract birds to his home after an unfortunate episode with a new air gun. Simple directions for constructing feeders and a bird bath are part of the "positive approach" in recounting the boy's development into a "boy who loves the birds and has done much to help them the past year." Illustrated with photos from author's own bird feeder.---G.M.S.

HISTORIC WISCONSIN BUILDINGS

By Richard W. E. Perrin

Milwaukee Public Museum
Milwaukee 3, Wisconsin
1962 95 pp. \$1.00

Because of the rapid rate at which Wisconsin's historic buildings are disappearing from the landscape and because of the urgency for action to prevent their complete destruction, educational and informational activity concerning the state's heritage needs to be greatly accelerated. This booklet, a consolidation of articles appearing in LORE, is not a comprehensive history of Wisconsin architecture but is an effort to further preservation of historic Wisconsin buildings. The author, an architect and director of the department of city development of Milwaukee, is vice-chairman of the national committee for historic buildings preservation for the American Institute of Architects and also Wisconsin's historic buildings preservation officer. Concerned with Wisconsin's his-

toric architecture for more than thirty years, Mr. Perrin participated in the Historical American Buildings Survey of 1934 and 1935, and on the basis of continuing studies since that time has made many voluntary contributions to the Survey and to the Historical American Buildings Inventory. He has cataloged over 700 historic Wisconsin structures and completed inventories and archival record documents on many of them for the Library of Congress. From these painstaking studies, the informational material and photographs were carefully selected to form the articles presented in this booklet. --- Adapted from a news release by W. N. MacBriar, Chief, Office of Information ServicesMPPM

Wisconsin Junior Academy of Science**1961-62 ANNUAL REVIEW**48 pp. 1962
8 1/2 x 11"
Jr. Acad.
of Science
Committee
(see below)

Any Wisconsin Academy Senior member who would like to have a copy of this first "Annual Review" of the Junior Academy of Science may secure one free by addressing Chairman JACK R. ARNDT, State Junior Academy Committee, Extension Division, Univ. of Wis., Madison 6. It is an expansion of the Wisconsin Academy Review Summer issue series which printed papers presented by Juniors at the annual meeting and contains other reports of interest to district and regional cooperators in this program. Besides the 21 papers, the publication contains an organizational outline of the Junior Academy and an editorial by Editor Arndt on this "Opportunity for Wisconsin Students." The availability free of back issues of certain Wisconsin Academy TRANSACTIONS for use by Junior Academy Groups is also announced.

Another Junior Academy publication produced by Chairman Arndt's committee is a 44-page processed report entitled "Abstracts of Research Papers Presented at the Spring Meetings of the Wisconsin Junior Academy of Science." This includes all papers at seven Senior High School district gatherings and three Junior High School Regional meetings.

MAC'S GUIDE TO WISCONSIN VACATIONS

By Malcolm Rosholt

For Sale at \$1.00 throughout the state or from Malcolm Rosholt, Rosholt, Wis. 1962 92 pp. Illus.

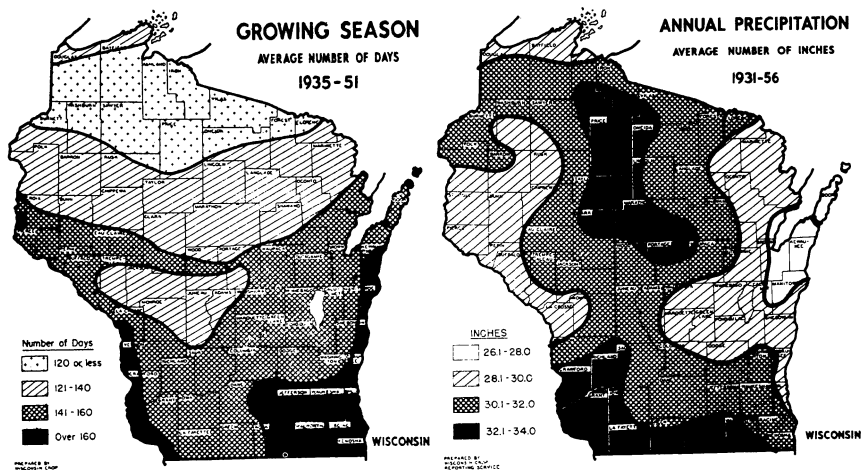
This 5½ x 8½" booklet has an attractive hardboard cover and 15 chapters on a fascinating subject. The author states that it was his intent to bring together in one place pertinent information on park and camping facilities, historic sites and museums, fishing, hunting, boating and summer sports. The coverage starts with "Our State Symbols" and ends with advice "On Hiring a Guide." Of special interest are such chapters as "Self-guided Tours" and "Spring on the Wolf River." There are over 20 maps and photos. --- W.E.S.

WISCONSIN 1955-60 CROP SUMMARY

By C. D. Caparoon, et al

Spec. Bulletin No. 80
Wisconsin Federal-State Crop Reporting Service, State Capitol, Madison 6
1962 101 pp. Illus.

This bulletin brings together the latest information on Wisconsin crop production. Recent revisions for the years 1955 to 1960 are included and carried down to show trends in crop output for each county. Increases in crop yields per acre are indicated along with the steady downward trend in the number of farms in the state. The eight major parts of this bulletin deal with Wisconsin crop uses, corn, oats and barley, wheat and rye, hay, other field crops, cash crops and vegetable crops respectively. Technical and statistical aspects of the publication were supervised by Charles A. Hines and Elmer W. Morehead supervised the editing work. It is an important contribution to Wisconsin's natural resource picture. The two maps shown here are of special interest. --- W.E.S.

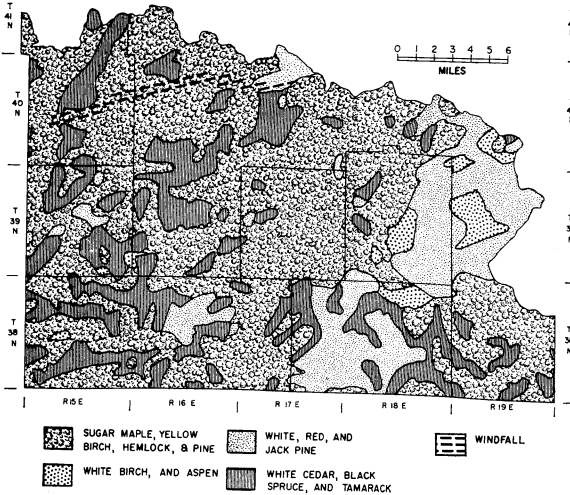


SOIL SURVEY OF FLORENCE COUNTY, WIS.
By Francis D. Hole, et al

Bull. 84 - Soil Series No. 59
Wis. Geol. & Nat.Hist. Survey
G.F. Hanson, Dir., Madison 6
1962 140 pp. Illus. \$1.50

**ORIGINAL VEGETATION AS OF ABOUT 1850
FLORENCE COUNTY, WISCONSIN**

(After Robert W. Finley, 1951)



This is another very fine contribution to the "Soil Series" done by a team under the leadership of Professor Francis D. Hole, including Gerald W. Olson, Keith O. Schumde and Clarence J. Milfred. Of special interest are two new features: a fold-out map showing "Some Hydrologic and Geologic Features of Florence County" and a map (reproduced here) of original vegetation about 1850.
--W.E.S.

SOIL SURVEY OF IOWA COUNTY, WIS.
By A. J. Klingelhoets

Series 1958, No. 22
U.S. Dept. Agr., S.C.S. Coop.
Wis. Geol. & Nat.Hist.Survey
1962 101 pp. 44 maps

Here is another of those extremely valuable detailed county soil surveys. The fold-out maps are 10x19" in size and show soil types on a background aerial photo base which also includes all roads, waterways, marshes, fields and woodland areas. The text explains the types of soil and their characteristics as well as general data on geology, water supply, climate and vegetation. Copies are best secured through either the Iowa County Agricultural Agent or your representatives in Congress.--W.E.S.

**TWO RECENT CONSERVATION
DEPARTMENT REPORTS**

Available from the Department
at Box 450, Madison 1, Wis.

Two recent WCD reports of significance are "Trends in Conservation Problems, 1960-1961" prepared by D. J. O'DONNELL and "Wolf River Watershed" prepared by C. W. THREINEN. Both are the result of committee study and action during the past two years. At least seven members of the Wisconsin Academy participated in the preparation of each of these reports. The "trends" publication covers two calendar years of data from county Coordinating Committees for Conservation Needs. The Wolf River report is primarily on the improvement and protection of this river for fish, wildlife, recreation and forestry purposes.

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JUNIOR ACADEMY NEWS

JUNIOR ACADEMY REPORT
By Jack Arndt, Chairman
Junior Academy Committee

SECOND ANNUAL STATE-WIDE JUNIOR SCIENCE SYMPOSIUM HELD Nov. 1-3, 1962

The enthusiasm of our next generation of scientists was shown during the second annual statewide Junior Science Symposium held on the University of Wisconsin campus, November 1-3, 1962. One hundred high school students and 25 science teachers from 25 schools, representing each geographic area, were present for the three-day meetings.

The objectives of the meetings were to search out potentially talented youth, promote the study of the sciences at the high school level, to assist the career-choosing process, and to further efforts to improve professional preparation of teachers.

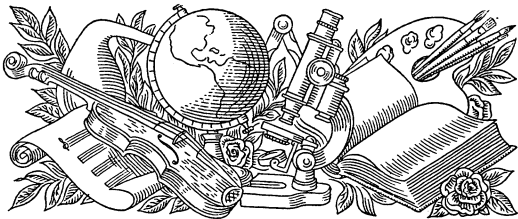
Five high school students who have done outstanding work in science and mathematics and have shown creative ability and a desire to go beyond the requirements of the classroom presented research papers and demonstrations. ERIC C. REINELT, Bay View High School (Milwaukee), discussed "Photographic Study of High Voltage Discharges;" JAMES S. FRANK, Nicolet HS (Milwaukee), "An Investigation of Vapor Pressure Laws in Relation to Temperature, Molecular Weight, and Concentration;" MICHAEL E. SWANSON, Cathedral HS (Superior), "Studies on Mosquito Saliva;" NANCY A. ODER, Richland Center HS, "Progression and Exploration of the Trisection of an Angle;" and PATRICK J. HARTMAN, Assumption HS (Wisconsin Rapids), "Topological Mapping."

Sister MARY LAURETTA of Columbus HS, Marshfield, addressed the teachers' section on "Scientific Research by High School Pupils." Research and progress on specific science subjects were presented by the following UW faculty members: JOHN W.M. ROTHNEY, HARRY F. HARLOW, ROBERT A. RAGOTZKIE, WILLIAM B. SARLES, ROBERT BURRIS, DAVID W. SMITH, L. CLINTON WEST and ARTHUR D. HASLER.

Financial support for the Symposium was from the U.S. Army Research Office (Durham, N.C.) and the Mathematics Research Center - U.S. Army (UW, Madison). Arrangements and program planning were under the chairmanship of JACK R. ARNDT, with Dean of Students LEROY E. LUBERG as coordinator.

Other schools sending representatives to the Symposium include Badger High School, Lake Geneva; Kimberly; Aquinas, La Crosse; South High School, Sheboygan; Tomahawk, Park Falls; Ashland; Ladysmith; Chippewa Falls; P.J. Jacobs, Stevens Point; Portage; Tomah; Prairie du Chien; Horlick High School, Racine; Horicon; Platteville; Neillsville; and Washington and Messmer, Milwaukee.

1961-62 Annual Review - As announced in the Spring 1962 issue, the Junior Academy issued their own "Review" this year. Further information about it appears in The Bookshelf section.



STATE AND ACADEMY NEWS



LAWRENCE COLLEGE (From the College News Bureau)

Lawrence College shifted from its traditional two semesters a year to a tri-semester plan in September, 1962. The plan, known as the 3-3, has as its principal fact that a student will take three concentrated courses per semester instead of the five at present, and that the three semesters will fall in the same space of time now allotted to two. At present, no summer semester is contemplated, but in the event that enrollment pressures force such extension of the school year, it can be accomplished very easily. . . . An instructor in education, DONALD A. LEMKE, was one of ten faculty members from Associated Colleges of the Midwest who traveled to Guatemala last summer to investigate setting up a "junior year in Latin America." . . . A \$776,000 addition to Lawrence College's present Carnegie library was dedicated in November. It doubles present facilities and is known as the Samuel Appleton-Carnegie Library.

Prof. STEPHEN F. DARLING, past president of the Academy, has resumed teaching on the campus after a year's leave of absence spent at the Institute of Paper Chemistry in Appleton. He and IRWIN PEARL of the Institute worked on studies on the barks of the family Salicaceae. . . . Academy member MERTON M. SEALTS, Jr. has received a Guggenheim Fellowship which enables him to spend the academic year at Harvard University. He is doing research study of the journals of Ralph Waldo Emerson. . . . Ground has been broken for a new dormitory for 178 men on the campus, to be completed by September, 1963. The building is expected to be completely full by next fall, for the college hopes to close Lawrence House, Brokaw annex and East House as well as provide for increased enrollment. . . . A new science building, to be known as the Casper E. Youngchild Hall of Science, is scheduled for completion by September, 1964. It has been made possible by the gift of \$1 million to Lawrence College by Casper E. Youngchild, retired general manager of manufacturing for the International Paper Company, who now lives in Appleton. It will be a companion structure to the Isaac Stephenson Hall of Science which was similarly made possible by a Marinette lumberman in 1899.

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MILWAUKEE-DOWNER COLLEGE



An exhibit of contemporary Thai art was held this fall at the college. Promoter of the exhibit was Academy member STANLEY POLACHEK of Milwaukee, who viewed such an exhibit in Bangkok last year while on a tour of the Orient with his wife. Primarily, Mr. Polacheck hopes that the exhibit will help to establish a bond of friendship between the two countries and that it will be an opening wedge to the American art buying public for Thailand artists. The college waived any commissions on the price of each picture, so that the full purchase price

could be returned to the artists. The USIA called it "an excellent example of a non-governmental people to people program, an appreciable help in augmenting the work of the USIA abroad."

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LAKELAND COLLEGE (Bob Spatt, News-Alumni Director)

JOHN B. MORLAND was installed as seventh president of Lakeland College on October 28, 1962. In his inaugural statement, he called for more attention to "education's larger purpose" and cultivating the individuality of students. "A good college is a place in which there is awareness that man is not pure intellect; it is a place where there is concern for the development and growth of the whole person," he said, in urging more emphasis of studying students as well as subjects. President FRED H. HARRINGTON, newly inaugurated a few days before at the University of Wisconsin, gave the main address. The impact of the age on higher education was a primary note as he observed that the liberal arts have a major responsibility to assess the powerful advances of the specialists. He stated that the strength of higher education lies in its diversity and added, "We are convinced that total education is worth something---it may be worth everything."

WILLIAM NICKLES, a native of Manitowoc, has been appointed an instructor in chemistry. He holds a master's degree from the University of Wisconsin and has previously taught in high schools and been associated with the Forest Products Laboratory. ... Lakeland College Student Affiliate Chapter of the American Chemical Society recently received its charter. Besides affiliate members from the chemistry department, the group includes associate members from the biology, mathematics and physics departments. Prof. JOHN SURAK of Marquette University was the main speaker at the charter banquet in November.

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MARQUETTE UNIVERSITY (Marquette News Bureau)

Prof. REZNEAT M. DARNELL (Zoology) has replaced Prof. DANIEL THOMPSON as the private college representative on the state board for the preservation of scientific areas. He was appointed by the President of the Wisconsin Academy, J. MARTIN KLOTSCHKE, in accordance with the statutes. Prof. Thompson has accepted leadership of the New York Cooperative Wildlife Research Unit with the Dept. of Conservation at Cornell University. ... New appointments on the Marquette campus include Fr. JOHN P. RAYNOR, S.J. as academic vice-president. DONALD McDONALD, formerly editor of the Marquette Magazine, has replaced J. L. O'SULLIVAN as dean of the College of Journalism. ... JEROME W. ARCHER (English) and JOSEPH SCHWARTZ are co-editors of "A Reader for Writers," an anthology of prose. Schwartz also just completed editing "Language: An Anthology," with JOHN A. RYCEGA. ... WILLIAM F. MILLINGTON, (botany) is co-author of "Atlas of Plant Morphology," a recently published book. ... Thirty-six Wisconsin public and private high school counselors participated during the summer in a government sponsored institute directed at the University by NICK J. TOPETZES (education). ... The Public Health service has granted continuing support of \$130,445 for current research projects at the University. Among those benefiting are: NORMAN E. BOUCHER, Jr. (microbiology), \$11,705 for study of the antigenic composition of saliva; and PETER ABRAMOFF (biology), \$6,290 for studies of tumor antigenicity.

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SORRY -- This Fall 1962 issue is late because of unusually heavy work assignments given to the Editor in the Conservation Department. Date of publication actually was January 1963 and it was decided to include some informational materials which actually became available after the Fall season.

The Editor's present heavy work load was foreseen and the Council was notified some time ago that they should try to find another Editor for the Review. Finally it was decided that the present Editor would continue his services until the end of 1963, completing ten full years in that capacity. He can attest to the fact that this position has been both wonderful and rewarding and urges anyone interested in working as Editor to contact any member of the Council with such welcome information.

It should be noted that the Editor's annual honorarium at present is \$300 plus postage. In the case of the present Editor practically none of the work can be done during the daytime as part of his regular job, although this would be a most desirable arrangement.

--- Walter E. Scott, Editor

UNIVERSITY OF WISCONSIN (Jack Newman and Jack Burke,
University News Service)



Prof. MENAHEM MANSOOR, chairman of Hebrew studies, has been appointed to the national committee for Hebrew achievement tests of the College Entrance Examination Board. He has also been named an honorary member and consultant, National Association on Standard Medical Vocabulary. ... Prof. EARL R. OATMAN (entomology) has resigned to accept a position at the University of California at Riverside. ... Prof. GERMAINE BREE, Humanities Research Institute, has been awarded an Honorary D.Litt. degree by Mount Holyoke College and delivered the principal address at Founder's Day convocation. ... Emeritus Prof. LAURENCE F. GRABER (agronomy) was honored by the Mineral Point Chamber of Commerce for his contributions to state agriculture.

LOUIS KAPLAN, director of UW libraries, reports that circulation at the Memorial library has increased by 103% since it was opened nine years ago. During the same period the number of students increased 50%. Planned for 18,000 students, it is already crowded by more than 20,000 on the Madison campus. Present book stack space will be fully occupied by 1972 or before. ... Prof. L. JOSEPH LLNS, coordinator of institutional studies, predicted a Madison campus enrollment of 20,500 for the second semester, the first time spring registration has topped 20,000. ... Prof. ELDON D. WARNER (UW-M zoology) was granted leave for the second semester to serve as visiting professor at Cornell University, and GERARD A. ROHLICH (civil engineering) to be visiting professor at the University of California. ... A Memorial Fund honoring RUTH I. WALKER, UW-M botany professor who died in December, has been established by colleagues, friends and students. It will encourage loans and scholarships for needy students and foster research in which she was long active. (An In Memoriam statement will appear next issue). ... Prof. DONN K. HAGLUND (UW-M geography) was elected chairman of the Great Lakes division, Association of American Geographers. ... Prof. REID A. BRYSON (meteorology) has been invited to participate in a seminar on the sub-arctic at the Plant Research Institute in Ottawa. ... Prof. HELEN C. WHITE (English) was elected president of the

Modern Humanities Research Association. ... Prof. ADOLPH A. SUPPAN (English) and director of the UW-M summer session, was appointed dean of the newly-established UW-M School of Fine Arts. ... Prof. MERLE CURTI (history) attended the International Association for the History of Ideas meeting in Mexico City. ... Emeritus Prof. HANS REESE (neurology) was awarded the Officer's Cross of Merit by the West German Federal Republic. ... Prof. ERWIN N. HIEBERT (history of science) was named to a committee advising a Harvard group in revising high school physics teaching. ... Prof. AARON J. IHDE (chemistry and history of science) has been re-elected chairman of the American Chemical Society's division of history of chemistry. Prof. Ihde is president-elect of the Wisconsin Academy and his book on the history of chemistry is scheduled for publication in 1963. ... Prof. JURIS VEIDMANIS (Sociology, UW-M) has published in the Wisconsin Magazine of History (Summer 1962) his paper presented at the Academy's annual meeting at La Crosse on May 4, 1962 entitled "Latvian Settlers in Wisconsin: A Comparative View." ... Appropriate ceremonies to commemorate the Centennial of the establishment of Land Grant Colleges were conducted this fall on the UW campus. Climaxing the celebration was the inauguration of the University's 14th president, FRED HARVEY HARRINGTON, on October 20. An historian as well as an administrator, President Harrington well understands the development of the new type of university resulting from the Morrill Land Grant Act signed by President Abraham Lincoln in 1862.

Earlier, before he was recalled to the UW presidency from a planned transfer to become president of the University of Hawaii, he spoke to the Board of Regents about Wisconsin's elements of greatness: "We at Wisconsin have not been afraid to speak out. ... We have been in favor of freedom of speech and academic freedom. ... Wisconsin has never been afraid to be different ... to do things that have never been done before. ... Here at Wisconsin we have maintained the belief that we can do a lot for a lot of people ... we are attached to the democratic tradition." ... Various publications were issued, including a "history digest" which appeared in May, 1962. The Review published Abraham Lincoln's "Address at the State Fair" in 1859 which foresaw such colleges (Summer, 1959), as well as a talk by Conrad A. Elvehjem entitled "Continuing Challenges for Land Grant Universities" (Winter, 1960).



MILTON COLLEGE



JAMES K. PHILLIPS (sociology) has published a condensed version of the paper he presented at the 1962 annual meeting of the Wisconsin Academy in the Milton College Alumni Magazine, Milton Today. It is entitled "Negro-White Integration in Rural Vernon County, Wisconsin." ... President PERCY L. DUNN was awarded an honorary Doctor of Laws degree by Alfred (N.Y.) University in October. He was lauded for his nearly 30 years of Boy Scout executive work as well as his leadership at Milton College. (More details in a later issue with a retirement profile.)

MILWAUKEE PUBLIC MUSEUM



Director STEPHAN F. BORHEGYI has announced a record number of donations to the Museum in 1962 - 4,851 items valued at \$100,155 were received, including many fine specimens. ... The Museum is seeking applicants for the position of Curator I in Botany. This is the professional entry level and the employe is expected to continue studies in botany to become eligible for promotion to levels where higher degrees are required.

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start early



for. THE UNIVERSITY OF WISCONSIN — MILWAUKEE

On May 3, 4 and 5, 1963 the University of Wisconsin-Milwaukee will be the host institution for the 93rd Annual Meeting of the Academy. The program committee has already completed preliminary planning. The tentative program schedule begins with registration on Friday evening followed by a lecture by a nationally known authority in urban affairs and a reception. On Saturday morning, an opening symposium on the general conference theme of "The Urban Scene" will feature invited experts on various topics related to the theme. Other program features include a special section on the conference theme by members invited to participate and three general sessions (one of each in the sciences, arts and letters) on Saturday afternoon. Other Saturday features include all-day presentations by Junior Academy of Science members, the traditional luncheon and banquet for Senior and Junior Academies, and an arts program in the evening. Alternative field trips are being planned for Sunday morning. --Ted J. McLaughlin, Secretary

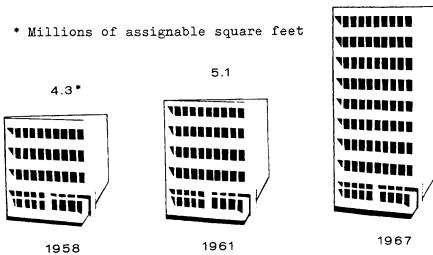


COORDINATING COMMITTEE FOR HIGHER EDUCATION

One thing is certain: Wisconsin's public college enrollments, space needs and budgets will be moving rapidly higher in the near future, according to publications issued recently by the Joint Staff, Coordinating Committee for Higher Education (333 Wisconsin Center, 702 Langdon st., Madison 6. Write to them for any copies wanted.) A report entitled "To Close the Gap," Chairman CARL E. STEIGER,

Space Available in 1958 And 1961-Space Needed By 1967 8.6

* Millions of assignable square feet



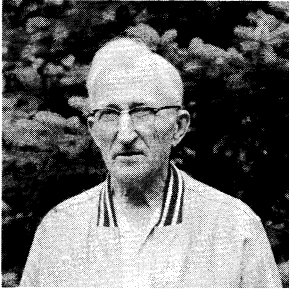
transmits estimates indicating a possible 75,000 students in 1967 and 96,000 in 1972 (as compared to 51,000 in 1961.) The increased amount of space that will be needed by 1967 is graphically expressed in the accompanying illustration taken from this report.

Titles of several important recent "Working Papers" by the Joint Staff are: No. 52, "Answers to Issues Raised by Gov. Nelson;" No. 66, Abstract of "Survey of State Legislation

Relating to Higher Education in 1961;" No. 67, Report to Legislature Re: "Long-range Plans for Operation of a System of Publicly Supported Higher Education in Wisconsin;" No. 69, "Request for Approval of Expansion of Engineering Programs at U.W.-Milwaukee;" No. 70, "Recommendations of the Interim Committee on Education Re: County Teacher Colleges;" No. 73, "Cooperative Graduate Program;" No. 74, "Request for Approval of Educational Television Plan;" No. 75, "State College Graduate Program for Classroom Teachers;" No. 77, "Actions of the State Building Commission Relative to University and State College Requests." Also published is a "Summary of Proposed Graduate Program."

* * * *

In Memoriam



Karl W. Kahmann 1886-1962

KARL W. KAHMANN, Hayward, Wisconsin, died October 1, 1962 in Duluth, Minnesota. He was born in St. Louis, Missouri on June 5, 1886 and moved to the Hayward area in 1925. An expert taxidermist, Mr. Kahmann was a naturalist and conservationist of some

note in the state. His "Noah's Ark Studio" on Minnemac lake in Sawyer county is familiar to many who vacation in the area as well as to local people. His column about wildlife and sportsmanship appeared regularly in the Sawyer County Record. He was very active in civic affairs and held many elective offices over the years. His work in the Masonic Lodge led to a citation by the Eau Claire Consistory in 1960 for "meritorious work in connection with the Ancient Accepted Scottish Rite." The Wisconsin Indian Head Association, a regional resort organization, recognized his help by conferring an honorary membership about a year ago. He was affiliated with many national and state-wide conservation and nature study organizations as well, and was associated with the Field Museum and the American Historical Society. Mr. Kahmann joined the Wisconsin Academy in 1954.

###

Frank Victor Buralow 1909-1962

FRANK VICTOR BURCALOW was born near Albany, Wisconsin on March 19, 1909 and died at Middleton, September 29, 1962. He obtained a B.S. degree from the University of Wisconsin in 1932 and after a period of operating the family dairy farm, returned to the University as an Assistant in Agronomy. He earned the M.S. degree in 1939 and continued in the department, where he was appointed Professor in 1949. Principally interested in the production and utilization of forage crops as related to Wisconsin dairy farming, he was concerned also with problems of soil and water conservation in relation to farming practice. Another special interest was the use of grasses for turf purposes. He was very instrumental in the development and success of Farm Progress Field Days. He became a member of the American Society of Agronomy in 1936, served on many committees interested in forage crop and pasture research, and in 1953 was made an Honorary Fellow of the organization. He carried out several overseas assignments as consultant and delegate during the 1940's and in 1952 was chairman of the Midwest Tours Committee of the VI International Grassland Congress. A memorial trust fund to aid students at the University of Wisconsin has been accepted by the U. W. Board of Regents.



###



Marvin F. Schweers
1904-1962

MARVIN F. SCHWEERS, Wisconsin soil conservation pioneer, was born at Shawano in 1904 and died at Madison on October 22, 1962. He obtained a bachelor's degree from the University of Wisconsin and a master's degree from Iowa State and joined the U. S. Department of Agriculture in 1933. Prior to that he had served on the agricultural engineering staffs of universities in Wisconsin, Illinois and Michigan. Farm planning to specify soil practices to keep the land within its capabilities for maximum protection from depletion and erosion was one of his first interests. He participated in developing the nationally-known Coon Creek Watershed project in Vernon county, the first in the United States. For a quarter century, as state conservationist with the Soil Conservation Service, he coordinated their programs closely with other agriculture agencies in the state and nation--for which he received a superior service award from the USDA in 1960. While tangible results of his efforts remain on the countryside as he worked to bring Wisconsin to a place of leadership in soil conservation, more intangible goals were reached through his forte of public relations. He held other awards from soil conservation organizations and was recognized posthumously by the Wisconsin Council of Agriculture Cooperative for outstanding service. He was affiliated with many professional organizations and was a 32nd degree Mason.

###

John A. Lonsdorf 1885-1962

JOHN A. LONSDORF of Birnamwood, Wisconsin, died at Wausau on October 19, 1962. He was born in the town of Newton, Manitowoc county, on February 7, 1885, his parents being among the earliest settlers there. Graduating from Milwaukee Normal School, he taught school for some years and studied law at the University of Wisconsin during the summers. After being admitted to the Bar in 1915 he practiced law in Appleton. He served as district attorney for Outagamie county for two terms and also was assessor of incomes. In 1945 he moved to the town of Norrie in Marathon county where he continued his law practice. Mr. Lonsdorf was a prolific writer with a special interest in history and some years ago received a Freedoms Foundation award for a patriotic poem. He was active in several writer's groups and served as treasurer for the Wisconsin Regional Writers Association for many years. He aided in the organization of the Antigo Writers' Club and was president of the Wausau Writers' Club at the time of his death. Mr. Lonsdorf had been a member of the Wisconsin Academy since 1954.

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Sketches: Lapham Mss collections at State Hist.Soc. of Wis., p. 159; Harvey A. Uber, p. 161; from "Gulliver's Travels" by Jonathan Swift, illustrated by Aldren Watson, published and copyrighted by Grosset & Dunlap, Inc., New York, by permission, p. 166; Francis D. Hole, p. 168; Whitbeck's High School Geography p. 170; 6th Annual Rpt. U.S. Geological Survey, 1884-85, Chamberlin and Salisbury's prelim.paper on the Driftless Area of the Upper Miss. Valley, pp. 171-172; "Wisconsin Wild Flowers," published by The Milwaukee Journal, p. 174.

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ATTEND THE 93RD ANNUAL MEETING, MAY 3-5, 1963
UNIVERSITY OF WISCONSIN-MILWAUKEE
General Theme: "The Urban Scene"



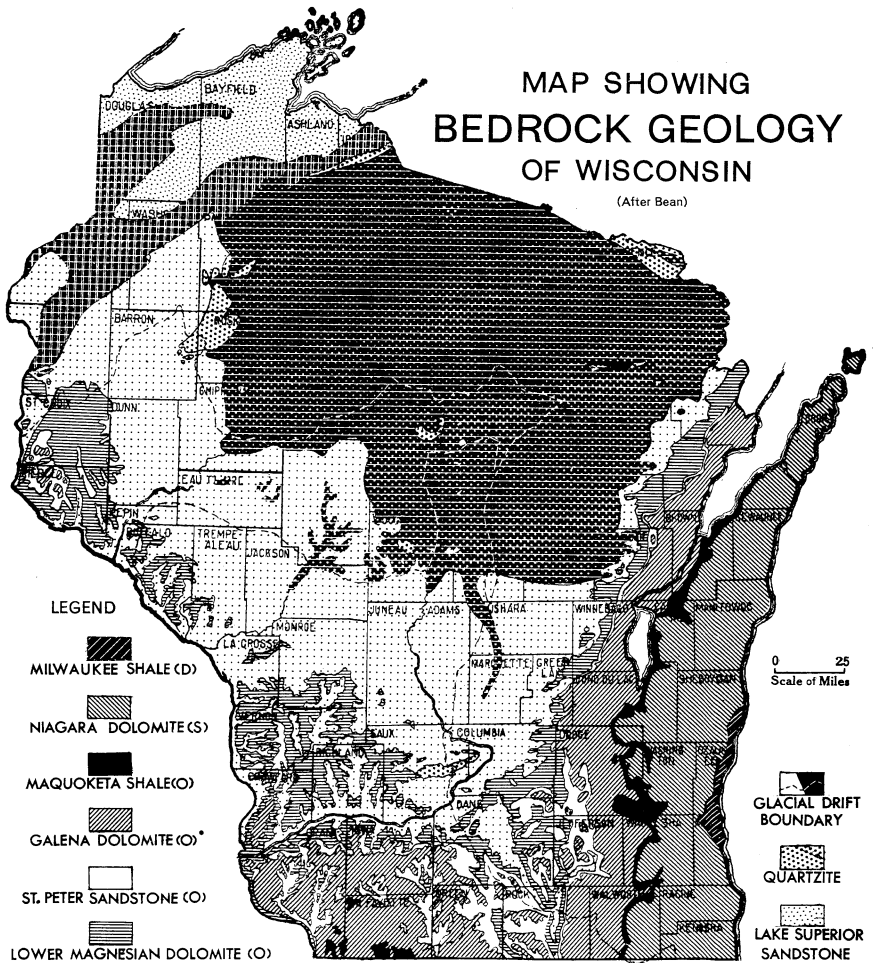
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MAP SHOWING BEDROCK GEOLOGY OF WISCONSIN

(After Bean)



LEGEND

- MILWAUKEE SHALE (C)
- NIAGARA DOLOMITE (S)
- MAQUOKETA SHALE (C)
- GALENA DOLOMITE (C)*
- ST. PETER SANDSTONE (C)
- LOWER MAGNESIAN DOLOMITE (C)
- UPPER CAMBRIAN SANDSTONE
- PRE-KEEWEENAW ROCKS,
CHIEFLY IGNEOUS
- KEEWEENAW IGNEOUS ROCKS
- GLACIAL DRIFT
BOUNDARY
- QUARTZITE
- LAKE SUPERIOR
SANDSTONE

SOILS DIV., WISC. GEOL. AND NAT. HIST. SURV.

*and Platteville.

Note: In legend, left, formations are in order of age, youngest at top.

F.D.H., 1950