Wisconsin Academy review. Volume 5, Number 2 Spring 1958

Madison, Wisconsin: Wisconsin Academy of Sciences, Arts and Letters, Spring 1958

WISCONSIN ACADEMY REVIEW

Spring, 1958

PUBLISHED QUARTERLY BY THE

WISCONSIN ACADEMY OF SCIENCES, ARTS AND LETTERS

WISCONSIN ACADEMY REVIEW
Vol. 5 Spring, 1958 No. 2

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Published quarterly in January, April, July and October by the Wisconsin Academy of Sciences, Arts and Letters. Active membership fee or library subscription of $3.00 per year includes subscription to both Wisconsin Academy Review and the annual TRANSACTIONS. Address all correspondence concerning Academy business to Francis D. Hole, Sec'y-Treas., 203 Soils Bldg., Univ. of Wisconsin, Madison 6. Correspondence concerning the publication should be sent to the Editor concerned. Single copies 25¢ each.

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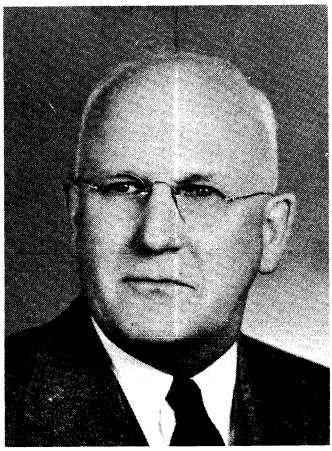
WISCONSIN'S SECOND STATE COLLEGE — WHITEWATER

By Mary Mills
Director of Publicity

Wisconsin State College, Whitewater, was dedicated in 1868 as Wisconsin State Normal School, Whitewater, "to furnish teachers for the public schools of the State, thoroughly trained for their profession."

For 90 years the school has been true to its original trust, serving the citizens of the state first as a normal school, then as a state teacher's college and now as a state college specializing in the education of teachers. Today approximately 68% of the student body are enrolled in teacher-education curriculums; the other 32% are enrolled in liberal arts courses.

Since ROBERT C. WILLIAMS became president of the College in 1946, he has led the faculty in emphasizing scholarship and the discipline of the minds of students. That emphasis is reflected in the broadening and deepening of the curriculum, in the stronger preparation of the faculty, and in the growing respect for scholarship on the part of students and the community. It is also reflected in the enrichment of the teacher-training program. Today's education graduate is a well-informed individual, versed in the humanities as well as in the subject matter and the methods of teaching his particular field.



Robert C. Williams
8th President

Establishment of a normal school at Whitewater resulted from the generosity of Whitewater citizens who foresaw the educational and cultural enrichment a school would bring to the community. Learning that the state legislature had authorized the establishment of two normal schools, Whitewater citizens voted to raise $20,000 by town tax and offered the money to the Board of Normal School Regents for use in construction of a normal school building at Whitewater. When the regents agreed to locate the school at Whitewater provided that the town donate $25,000 and a suitable site, citizens levied the tax and circulated a private subscription to raise the necessary funds.

The original building, which now forms the center of the main building, was erected on a beautifully wooded drumlin overlooking "a wide extent of rolling prairie, oak openings and small lakes." The site was landscaped to preserve its natural beauty, and was later planted with all trees and shrubs native to Wisconsin so that it forms an arboretum. The original building was designed by Randall of Chicago, one of the most eminent architects of the time.

The Whitewater Normal School opened in 1868 with a faculty of nine headed by OLIVER AREY, a student body of 48, and a model (training) school enrolling 102 pupils. At first only one course of study was offered, but in 1874 the regents authorized the expansion of the curriculum to include a four-year advanced course. By their action the regents began the expansion and enrichment of the curriculum which have come to characterize the school.

In 1913 Whitewater State Normal School became the second school in the United States to offer a program for training teachers of business subjects. The school soon won a national reputation for excellence and leadership in business education, a reputation it continues to enjoy. Today Whitewater's 3,000 business education graduates head business departments in schools and colleges throughout the United States and Hawaii.

As the Normal School grew, its courses of study broadened and developed until they came to include four years of college work. In 1925 the State Legislature authorized the college to confer the bachelor of education degree on its graduates and changed the school's name to Whitewater State Teachers College.

The years 1925 to 1951 were characterized by a continued enrichment of the curriculum through the addition

Harold Andersen Library-Administration building

A newly remodelled and equipped biology laboratory

of more and more liberal courses. In 1951 Whitewater became a State College, dedicated first to the preparation of competent teachers and secondly to the service of Wisconsin students who wish to attend a tax-supported college but who do not wish to become teachers. The liberal arts courses are attracting an increasing number of students who seek the advantages of personal instruction in a State College. Among them are many majoring in science, mathematics or the humanities, or preparing to enter professional schools.

At present Whitewater is engaged in a building and remodelling program to provide the most modern facilities available for a college of its type. In 1953 Harold Andersen Library-Administration building was completed. The same year the college opened its first dormitory for women. At present a men's dormitory to house 220 students is under construction, and soon ground will have been broken for the construction of a $600,000 student union. Plans for construction of a new laboratory school are now being drawn. A site for a new field house and athletic field was purchased recently, and construction of the field house is hoped for soon.

Last year the science laboratories were remodelled and re-equipped at an expenditure of approximately $75,000. Earlier remodelling provided attractive modern studios and classrooms for the music and art departments.

Eight presidents have guided the College. OLIVER AREY (1868-1876), WILLIAM F. PHELPS (1876-1878) and JOHN W. STEARNS (1878-1885) headed it during its early years. President ALBERT SALISBURY (1885-1911) gave it leadership and direction during its most critical years. President ALBERT H. YODER (1911-1919) instituted the business

education division. FRANK S. HYER (1919-1930) and C. M. YODER (1930-1945) guided it as it developed into a four-year college. And President ROBERT C. WILLIAMS (1946-) is directing it toward greater scholarship and prestige.

Today the College enrolls over 1,400 full time campus students and serves over 400 teachers in Saturday and extension classes. It grants bachelor degrees in education, science and the arts. Since its founding 90 years ago, it has grown and broadened its service to the State, but it has never wavered from its original trust: the preparation of the thoroughly trained teachers essential for the education of an enlightened citizenry.

# # #

THE KETTLE MORAINE AREA OF WISCONSIN

The map on the back cover of this issue was taken from T. C. CHAMBERLAIN'S article "On the Extent and Significance of the Wisconsin Kettle Moraine," published (1878) in Vol. IV of the Wisconsin Academy TRANSACTIONS (pp.201-234). At this time Chamberlain was State Geologist and Prof. of Geology at Beloit College. He later became President of the Wisconsin Academy (1884-1887) and President of the U.W. (1887-1892). Following are some selected quotations from his paper presented to the Academy over 80 years ago on December 26, 1877:

"Next to the depressions themselves [kettles], the most striking feature of this singular formation is their counterpart in the form of rounded hills and hillocks, that may, not inaptly, be styled inverted kettles. These give to the surface an irregularity sometimes fittingly designated 'knobby drift.' ... The multitude of small lakes, found in Wisconsin, lie almost exclusively either along the Kettle belt itself, or in the area within, or north of it. ... In the towns of Portland and Waterloo, which lie within the area of the Green Bay glacier, and from twenty-five to thirty miles distant from the moraine, there are several domes of quartzite that rise through the horizontal sandstones and limestones, which occupy the surrounding region. These domes are glacially abraded and grooved in a direction S.30°W., and trains of quartzite boulders stretch away in that direction to the moraine, and, mingling with it, pass onward to an equal distance beyond. ... The moraine constitutes a definite historical datum line, in the midst of the glacial epoch, and becomes a basis of reference and correlation for adjacent formations. It is an historical rampart, outlining the great dynamic agency of the period, at an important stage of its activity, and separating the formations on either hand by a chronological barrier."

# # #

WISCONSIN DIAMONDS

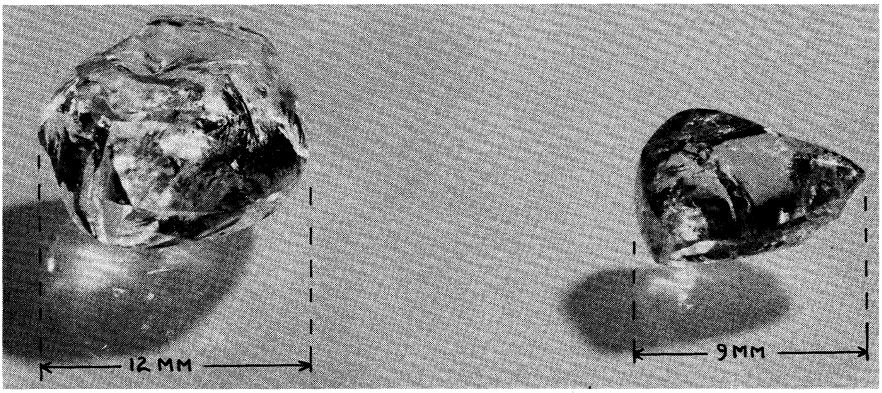
By Arthur A. Vierthaler
U. W. Dept. of Art and Art Education

The theory of glacial geology is accepted as the most logical explanation of why diamonds are found in Wisconsin gravels. During the time the ice cap of the glacial period covered the entire northwest portion of our continent, on more than one occasion, it moved into the territory of the United States. The Great Lakes diamond region is essentially the terminal moraine of the last ice sheet. As this final ice cap moved over the land from Northeastern Canada, it deposited diamonds along with other glacial debris from their original source. Even though the source has never been found, it is known that these diamonds must come from one or more extinct volcanoes.

Diamonds are found in extinct volcanoes which contain kimberlite, a dark greenish igneous rock of the peridotite family. Volcanoes of this type must have existed somewhere between the Hudson Bay and the Lake Superior area.

In the State of Wisconsin, diamonds have been found in the geographical provinces of the Western uplands and the Eastern ridges and lowlands. This last district includes the "kettle moraine" which has produced most of the diamonds found in the Great Lakes region.

According to reports, the first diamond found in Wisconsin was on a farm near Eagle, Waukesha county, in 1876. Records state that the stone was found while drilling a well. It came to the surface with material from a depth of about 65 feet. The weight of this stone was 16¼ carats and, at present, it is in the collection of the American Museum of Natural History in New York. Other diamonds found in Wisconsin include several stones from Plum Creek, Pierce county, area. The largest of these was 3/4 carat in weight. One stone, weighing about 4 carats, was found southeast of Oregon in Dane county. Burlington, Racine county, produced a stone of 2.11 carats and Saukville, Ozaukee county, a 6.57 carat stone. The largest was found near Kohlsville, Washington county. This stone,

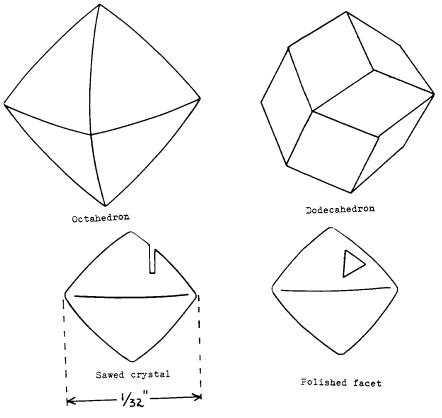


The Saukville Diamond on the left is a white stone, very clear, and weighs 6.57 carats. On the right is the Burlington diamond which has a bluish-green white color and a carat weight of 2.11. Present owner is Bunde & Upmeyer Co., Milwaukee, Wisconsin

known as the "Theresa Diamond," weighed 21½ carats and was later cut into 10 stones ranging from 1.48 carats to .65 carats each.

It is noteworthy to mention at this time that all diamonds of any consequence have all been found prior to 1900. Discussion with GEORGE F. HANSON, State Geologist, bears out the fact that no diamonds have been found or reported in these areas, even after extensive geological investigations of gravels and in drillings in the state, made in the past 35 years.

Recently there have been an increasing number of articles written about finding diamonds in Wisconsin. The latest to mention this fact is an article entitled "Mine Your Backyard for Riches" in the March 1958 issue of True Magazine. Even though they are somewhat true, these articles are often aglow with semi-facts, misleading statements and filled with romantic ideas to encourage people to think anyone can find diamonds easily in Wisconsin. This is very discouraging, especially when one relates one of the experiences I have had in this respect



regarding diamonds. Last year, while teaching a course in Gem Identification at the University of Wisconsin-Milwaukee, one of the students brought in a handful of very small diamond crystals he received from a man who claimed he was mining them from land near Eagle, Wisconsin. The largest of these was 1/32 of an inch in diameter. On microscopic inspection, all of these stones were found to be octahedron (8 sided) in form. All records describing diamonds found in Wisconsin show the crystal form as dodecahedron (12 sided). One of the stones clearly showed the slit of a diamond saw and the other one had a very tiny polished facet on its outer surface. The conclusion one draws from this type of finding clearly points out that these are not of Wisconsin origin.

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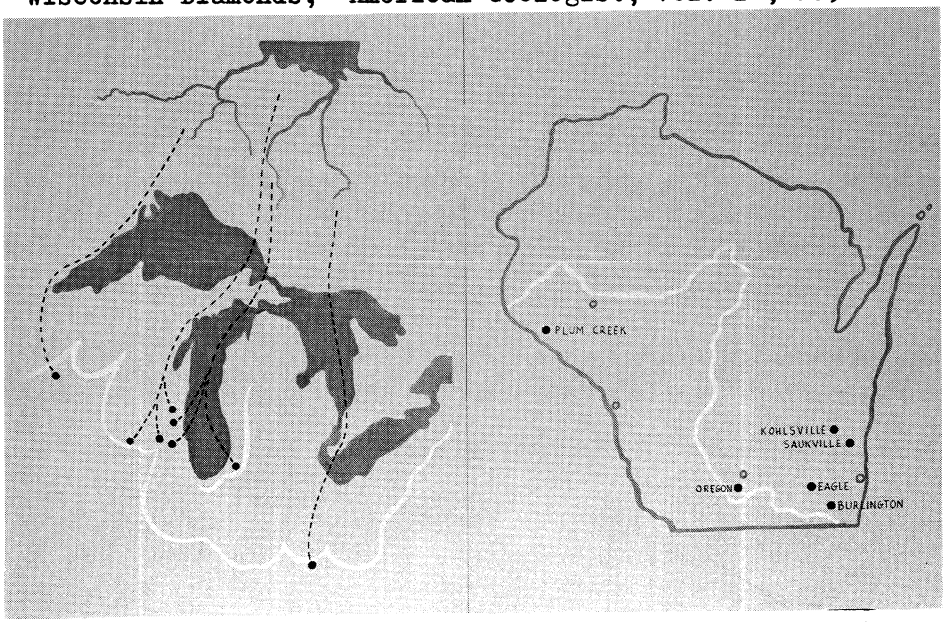
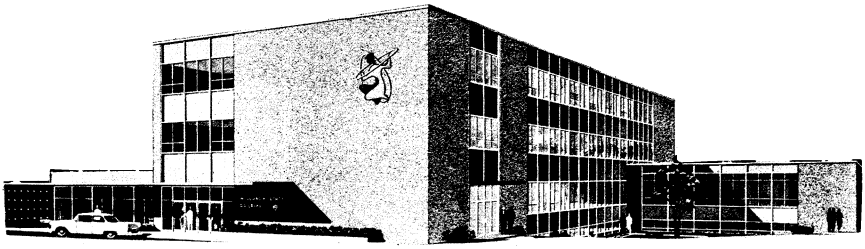


Left: White lines represent extent of later ice movement. Dotted lines represent routes of ice movement which probably contained diamonds - Lake Superior lobe; Green Bay lobe; Lake Michigan lobe; Lake Huron lobe (Hobbs)
Right: White line represents boundary of Wisconsin drift.

DEDICATION



WISCONSIN CENTER BUILDING

Dedication of the $2,400,000 Wisconsin Center Building for adult education at the University of Wisconsin in Madison will take place Friday, April 11, followed immediately by the first annual Wisconsin Center Forum. The dedication ceremony will begin at 9:30 a.m. with the University of Wisconsin Foundation formally presenting the Wisconsin Center Building to the University and the State. HOWARD I. POTTER, Chicago, and FRANK V. BIRCH, Milwaukee, chairman of the board and president respectively, will represent the Foundation.

Regent President WILBUR N. RENK, Sun Prairie, will accept for the regents while University Pres. E. B. FRED will speak on what the building will mean to the University's overall program. The first Forum session will open in the Center Auditorium at 10 a.m., with the afternoon Forum at 2:30. Luncheon will be at the nearby Memorial Union and the 7 p.m. dinner in Great Hall there.

University faculty members appearing on the program and their subjects, include:
Morning Forum - FARRINGTON DANIELS, Chemistry and Energy; W. ROBERT MARSHALL, Engineering; VAN R. POTTER, Cancer Research; and HENRY L. AHLGREN, Agriculture.
Luncheon - Toastmaster will be Provost J. MARTIN KLOTSCHE of the University of Wisconsin-Milwaukee and the speaker will be MICHAEL PETROVICH on the subject, "War and Peace, 1958."
Afternoon Forum - MERLE CURTI, Social Studies; W. DONALD KNIGHT, Business and the University; VERNER E. SUOMI, Satellites and Meteorology; and J. WILLARD HURST, Law and Society.

Closing remarks will be made by IRA L. BALDWIN, U. W. vice-president of academic affairs. Moderators for the various sessions will be Deans MARK H. INGRAHAM of the College of Letters and Science; JOHN Z. BOWERS of the Medical School; and Profs. HELEN C. WHITE of the English department and FRED H. HARRINGTON of history. Toastmaster for the dinner program will be Foundation Pres. BIRCH, who will call for brief remarks from Governor VERNON W. THOMSON, UW Pres.-Designate CONRAD A. ELVEHJEM and HERBERT V. KOHLER, chairman of the Foundation's Center Fund Campaign. Principal speaker will be EARL D. JOHNSON of New York, senior vice-president of General Dynamics Corp. and U.W. alumnus.

Planned solely to serve the "Wisconsin Idea" of extending the educational benefits of the University to all citizens of the state the Center Building will serve hundreds of adult groups for seminars, conferences, and short courses each year. The modern three-story structure is equipped with lecture, committee and other rooms of varying size to suit different groups.

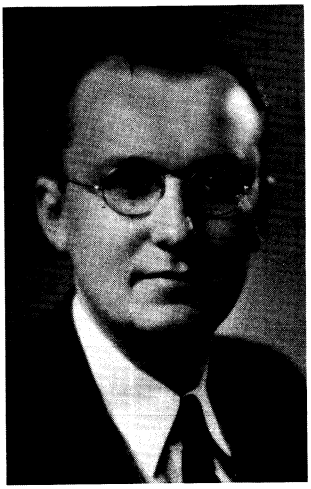
# # #

THE UNITY OF KNOWLEDGE*

By Fred H. Harrington
Special Assistant to the President
University of Wisconsin

We are all specialists--experts or on our way to becoming experts in special fields. This is as it should be. The great technological and social changes of the past century have grown out of the work of specialists; and today we need experts as never before.

But we should not forget that each of our specialties is related to other fields of learning. Human knowledge is all one piece. We can divide it and subdivide it; but when we are tackling the big jobs, we must put the pieces back together. So each specialist must see his field in its relationship to all the rest of knowledge.



Every University adviser has heard these words: "I hate science. I am going to be an English teacher, or a lawyer, or a businessman. I want to get the science requirement off as painlessly as possible. What is the easiest science course?" Every adviser has heard these words, "I am going to be an engineer, or a physician, or an organic chemist. Why do I have to study literature and history?"

What do the advisers say? Sometimes we answer, "If you are going to be a scientist, it will not do you any harm to read a little poetry, or listen to some lectures on contemporary foreign policy." Or we say, "If you are going into sociology or education, maybe you will find that mathematics and botany are not really as unpleasant as you imagined."

Actually, we should be much more positive. For the plain fact is, no writer, philosopher, journalist, librarian or political scientist can understand the world today unless he has a grasp of science and technology. Science has so changed the world that it cannot be ignored

* - Remarks at the Convocation Honoring January Graduates, Univ. of Wisconsin, Madison, January 18, 1958.

or set aside, or considered as a thing apart from the social studies and humanities. The technological and scientific discoveries and improvements of the past century are built into every aspect of our culture. We must realize this, we must apply this knowledge, whatever our specialties may be. Perhaps there was a day, some generations back, when the musicians and economists and diplomats could train themselves and live their lives without much reference to the natural sciences. But that day has gone, and it will not return.

In like fashion no scientist or engineer can hope to be a leader unless he realizes that he is dealing with human beings as well as with scientific forces--unless he deals in values as well as in terms of power. Perhaps there was a day when the scientist in his laboratory or the engineer out on construction could ignore the political and social and economic forces of the world around him. But not in our age, when we are calling on scientists and engineers for leadership as well as for technological improvements.

Let us take two examples. Here in Wisconsin we are becoming more and more an urban and industrial state, with grave new problems connected with these developments. At the same time, our agriculture remains important, and essential to our prosperity; and it is changing too, and has a new relationship to our urban communities. Now, in tackling the problems of our farms and cities, we need all sorts of specialists--taxation experts and laboratory scientists; mechanical engineers and sociologists; physicians, lawyers, educators. We need these specialists working separately--and we need them working together, for no specialist can do the job alone.

If this is so at home, think how much more true it is when we move to the broader area of world problems. Here too we need the specialists--the physicists and diplomats; the linguists and the professional military men, the mathematicians and the economists, the engineers and the specialists in the culture of various foreign countries. All of these are needed; and all must work together if we are to make headway in meeting problems which clearly affect the future of mankind.

Can we work together? Back in the 17th and 18th centuries, it was customary to think of knowledge as a unit. Philosophical societies in Europe and America gave attention to the natural sciences and the humanities. As discoveries piled up, the scholars divided knowledge, for convenience, into the biological and physical sciences, the social studies and humanities. Then each of these was subdivided, and divided again; and in our

century many people think of the various fields of learning as distinct and competitive, not as part of one great whole.

Lately, however, there has been a strong and vital trend toward unity. After dividing themselves into scores of specialties, the natural scientists are now working together more than ever across disciplinary lines. This is true not only inside the biological sciences and inside the physical sciences, but in combinations of the two; and in many cases applied and basic studies go hand in hand. So, too, with the social studies and humanities. After generations of pulling apart, the specialists are now learning the advantages of cooperation.

Not only that; we are beginning, too, to see evidence of the most important trend of all--cooperation of social studies and humanities with the natural sciences in attacking problems of significance to all.

What does all this mean to the University, the state and nation? It means, of course, that strength in one specialty helps other specialties; and that fundamental weakness at any important point will weaken the whole fabric. We are fortunate at Wisconsin that we have the tradition of a total University, strong in many fields, and strong in cooperation across disciplinary lines. From this tradition comes much of our strength; and much of our hope for the long future.

# # #

A NOTE ON THE COVER PAINTING

SCHOMER LICHTNER studied art at Milwaukee State Teachers College under GUSTAVE MOELLER. Later he studied in New York City before returning to live and work in Milwaukee. He has completed important mural projects during the days of government commission for federal post offices and since that time has completed commissions for private companies and individuals.

Schomer and his wife, RUTH GROTENRATH LICHTNER, have always enjoyed the Holy Hill region in Wisconsin. The brush and ink sketch on the cover is one of hundreds of studies and paintings he has done of the Hill itself and of the landscape, farms, barnyards in that part of the Kettle Moraine area. Schomer Lichtner has, in addition to his professional work in the arts, taught classes at the Wooster Museum in Racine, the University Extension in Milwaukee, the Milwaukee Layton School of Art, and last fall with Mrs. Lichtner he taught an extension class for 4-H Leaders at the Clearing in Door County. They will continue that class again this year.--Frederick M. Logan

INTRODUCING

CONRAD A. ELVEHJEM

President-Designate

University of Wisconsin

CONRAD A. ELVEHJEM, one of the nation's foremost scientists, dean of the University of Wisconsin Graduate School since 1946, and chairman of the UW department of biochemistry since 1944, was elected 13th president of the University by the regents February 1. He will succeed another eminent scientist as president, EDWIN BROUN FRED, who will retire July 1 after having served 13 years in the University's highest office.

A scientist who has won many of the nation's highest awards and acclamations for his research, Elvehjem has been described as endowed with an unassuming Norwegian manner and a pleasant way of making difficult tasks look easy; as an exponent of direct action and an individual who moves quickly in making decision; and as a researcher experienced at bringing a trained mind to bear on administrative problems.

He is an advocate of balance in the University's program, balance in terms of financing and in terms of faculty and instruction. He believes that research, for example, should find support from many sources, thus no single one will influence the direction of the University's inquiry. He believes Wisconsin students should have the finest instruction available in sciences, arts, social sciences, humanities. In a recent address, Elvehjem pointed out the need to develop professional competence in an increasing number of young people. He added that basic research in all fields must be expanded if the nation is to continue to develop at a satisfactory pace. "Only by the continuous development of basic concepts can the practical arts advance," he emphasizes. Two conditions are essential for research to flourish, he adds. These are personnel of high intelligence and motivation, and a

place with sufficient equipment for the work to be done. "Intellectual curiosity is always the best motivation for research," he maintains.

Elvehjem is a native of McFarland, Wisconsin, and is a 100% Wisconsin product, having received his bachelor's degree in 1923 and his doctorate in biochemistry in 1927. He began his scientific career working with famed biochemists E. B. HART and HARRY STEENBOCK, and first gained scientific attention with his early discoveries concerning iron and copper deficiencies in certain diseases. This led to his appointment to a National Research Council fellowship that took him to Cambridge, England, for one year. There he became interested in enzyme systems, and upon his return to Wisconsin brought with him the University's first Warburg respirometer, a basic apparatus for research on enzyme activity. He was made a full professor of biochemistry in 1936 at the age of 35.

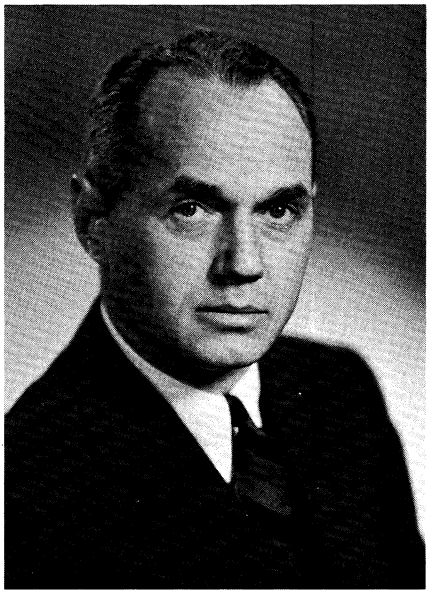
Elvehjem earned a lasting place among the great fighters of the hidden hungers in 1937 with his discovery that nicotinic acid deficiency is the cause of pellagra, a disease that once ravaged the peoples of the southern United States and many countries of the world. For this work he was granted, in 1939, the first of the Mead-Johnson Awards. Other distinctions followed for work on the vitamin B complex and for subsequent research. He has received the American Chemical Society's Willard Gibbs Medal, the Osborne-Mendal Award from the American Institute of Nutrition, the Lasker Award of the American Public Health Association, and the American Chemical Society's Charles F. Spencer Award. The second UW faculty member to be elected to the Academy of Arts & Sciences, he also is a member of the National Academy of Sciences.

Dean Elvehjem is married, and he and his wife, Constance, and their two children, Robert, a sophomore at the University, and Peggy, a 1953 University graduate in home economics, live at 741 Oneida Place in Madison.

--James A. Larsen.

# # #

ACKNOWLEDGMENTS - Photos on pages 53, 54, 60 and 63 from U.W. Photo Lab and latter one of I. A. Lapham courtesy of State Historical Society from an oil painting in their collections by Samuel M. Brookes, ca. 1855. Harold Hone photo, p. 57, and that of Kohler, p. 62, from Rogers Crocker Studio, Sheboygan. Picture of Rohde, p. 66, from The Amalgamator of Jan. 1958. Plant sketches, p. 76, from W. I. Beecroft's "Who's Who Among the Wild Flowers and Ferns." Bumblebee sketch, p. 85, from "We Can All Help Save Our Soil," U.W. Extension Cir. 360, by O. R. Zeasman and J. W. Clark. Sketch p.89 (Charles Schwartz) and p.90, from "The Natural Resources of Wis."



WALTER J. KOHLER, JR.

NEW LIFE MEMBER

WALTER J. KOHLER, Jr., a sustaining member of the Academy since 1955, is welcomed as a Life Member. A former Governor of Wisconsin, he is President of the Vollrath Company of Sheboygan and Chairman of the Board of Directors of the American Cancer Society. He headed the Society's Division campaign in Wisconsin in 1947 and has been on their Executive Committee since 1949.

Born at Sheboygan in 1904, he attended public schools there, Phillips Academy, Andover, and graduated from Yale in 1925. He also holds honorary degrees from Beloit and Ripon Colleges. During summer vacations, he worked as a laborer in his father's company, Kohler of Kohler; subsequently he worked in engineering, ceramic research, sales and merchandising in the company.

He volunteered for military service the day after Pearl Harbor and served for 3½ years in the U. S. Navy, most of the time in the Pacific combat area. On his return he became active in politics and in 1948 went to the Republican National Convention as chairman of the Wisconsin delegation. Elected Governor in 1950, he was re-elected in 1952 by the largest majority in the state's history. Until February 1951 he was chairman of the Wisconsin Committee on the Reorganization of the Federal Government.

His varied pursuits on behalf of the public leave him little time for personal hobbies, though he still indulges his vital interest in the lively arts, notably the theater and concert stage. Married, and the father of two children, he lives at Windway, Kohler.

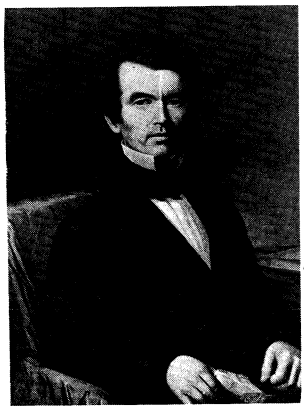
# # #

WHY STUDY NATURAL SCIENCE?

By Increase A. Lapham
A Founder and First Secretary
of the Academy, 1870-1875

Editor's Note: Excerpt from an unpublished manuscript in the Lapham papers at the Wisconsin State Historical Society. On January 23, 1840 (at age 29) Lapham gave a lecture in the Milwaukee Lyceum series; we present the portion in which he explained his philosophy on the use of the study of natural science. His advice is still good, 118 years later.

There are persons, and possibly there may be some here, who are disposed to ask--what is the use of this study? What possible benefit can it be to any person to become acquainted with the animals, plants, and minerals, by which he is surrounded?



To such I would say that if we regard it in the narrow light of money making - if we regard nothing as beneficial unless it redounds to our immediate pecuniary advantage--then these pursuits might about as well be let alone. But when we reflect that many of the states, and the General Government, are now making Geological surveys, embracing an examination of the animals and plants; and that as their importance become known and appreciated, other states will do the same--when we reflect that naturalists are attached to all our exploring Expeditions--that professorships of natural science are established in many of our colleges and universities, who will say that these pursuits may not lead to pecuniary profit. In exploring a new country like ours a knowledge of mineralogy and geology may enable us to detect the presence of valuable ores or mineral beds, whose existence might otherwise never have been suspected.

But there are other higher reasons for pursuing these studies. There is a pleasure, a pure and unalloyed pleasure connected with them that is seldom found anywhere else. Pursh, the enthusiastic botanist, would travel for whole days through almost impenetrable swamps

and thickets, with a load of sixty pounds on his back, and think himself amply rewarded for all this toil, and hardship, if he could add one new plant to the Flora of the country. He experienced a pleasure in making new discoveries, far beyond what could have been afforded him by any of our ordinary means of enjoyment.

Douglass lost his life in his eagerness to extend the knowledge of plants. He was traveling as botanist for the Horticultural Society of London, and while searching for plants, he by some unfortunate mis-step, fell into a pit prepared to entrap the wild cattle, and was immediately trampled upon and killed by an infuriated bullock that had been previously caught in the trap.

An ardent love for the natural sciences has induced Thomas Nuttall to travel all over the United States in search of new plants, &c. More than 22 years ago he traveled through what is now Wisconsin, and has published in his valuable "Genera of North American Plants" many new and interesting discoveries made at Green Bay and along the Neenah and Wisconsin rivers. He has since visited the wilds of Arkansas and more recently has explored the vegetable wonders of the Rocky Mountains.

The late Thomas Say devoted his whole lifetime to these pursuits--he has, perhaps, described more new species of insects than any other modern naturalist.

Drummond visited all our northern regions, to the polar ice, and the summits of the Rocky Mountains in search of plants--and he has enriched the science with many new descoveries (sic). At one time he came very near being embraced in the unwelcome hug of a grisley (sic) bear, and being devoured by that most ferocious and dangerous of American animals. He found that he had a sure protection against them, in his tin specimen box; for by rattling upon that the bear would immediately "make off"--with all possible haste.

If the natural sciences have pleasures sufficient to induce men of learning, like these, who are able to live in ease and comfort at home, to devote themselves to their pursuits--to go through all these hardships and dangers--we may suppose that they possess some very enticing charms.

From what I have said of the extent and variety of the pursuits of a naturalist we may suppose that these pleasures--these charms--have no end. There is no life so long as to be in any danger of exhausting them. There is no condition of life debarred from these pleasures; all may study nature,--the poor as well as the rich--

old--young--male and female--the ignorant--the learned--all may enjoy the pure and simple pleasures they afford. And all seasons of the year afford opportunities of studying nature--winter as well as summer. The winter is the time for reviewing, arranging and studying more minutely, the objects collected during the summer.

It is admitted by all who have any knowledge of human nature, that every person, and especially every young person, must have amusements of some kind or other. We all need some relaxation from our severer duties and studies--the mind as well as the body must have its season of recreation and repose. Daily observation will convince anyone of this. We see people attending theatres, balls, and parties--we see men playing at ball, or rolling upon the Nine pin alley--we see them at the chess board, the billiard and the card table--and what is all this for, but to amuse ourselves, and, by a little relaxation, prepare ourselves for more vigorous and active exertion afterwards.

Now if it be admitted that young people must have amusements, it becomes their elders who have their welfare at heart, to provide for them those which are pure and rational, and which tend to their moral and intellectual advancement, rather than suffer them to follow every, and any amusement that may happen to fall in their way--many of which may have an opposite tendency.

Here then we have one of the most important arguments in favor of our sciences. Teach young persons to relish the pure and simple beauties of nature--excite in their bosoms an ardent and enthusiastic love of the wonderful works of the Great Creator and you have one of the surest safeguards against immorality and vice.

# # #

WISCONSIN PRIVATE COLLEGES OPPOSE ASKING FEDERAL FUNDS

President ROBERT D. STEELE of Carroll College recently announced that the Wisconsin Assn. of College Presidents and Deans (of which he is President), including 16 private liberal arts colleges, had adopted a resolution against seeking government financial aid. The resolution read in part: "We are unwilling to accept the fatalistic position that private individuals and enterprise are unable or unwilling to support private higher education ... (and) we feel it to be our particular position of trust to preserve our social institutions by gaining increased support of private individuals and voluntary philanthropy rather than to seek assistance through government support."

# # #

HUGO W. ROHDE — MEMBER SINCE 1898

HUGO W. ROHDE, a member of the Wisconsin Academy for sixty years, longer than any other living member, became affiliated with the organization before he graduated from the University. In 1947 he was elected a Life member. A present living in the Kettle Moraine at Oconomowoc, he will be the honored guest at the Academy's annual dinner at Whitewater on May 3, climaxing a symposium on the Kettle Moraine area.

Born in Milwaukee, Mr. Rohde graduated from the U.W. in 1901 with a B.S. in chemistry. Later he was a member of the Advisory Board, Dept. of Chemistry at the University. Before his retirement in 1951, he was chief chemist and chemical engineer in charge of production at the Joseph Schlitz Brewing Company. Both the American Chemical Society and the American Institute of Chemical Engineers raised his membership to emeritus status in 1951, and he was elected to honorary membership of the American Society of Brewing Chemists (of which he was a founder) and the Chemist's Circle of Milwaukee. He has been a member of the American Chemical Society since 1905 and was honored recently as a charter member of the Wisconsin Section at Madison, as well as being made Honorary Chairman of the Milwaukee Section for their 50th anniversary year.

Possessing a thorough knowledge of the brewing industry, Mr. Rohde received first prize in 1909 for an essay sponsored by the U. S. Brewmasters' Assn. on deposit formation in bottled beer. In a lecture presented later to the same society he predicted several things regarding brewing which were later verified. He worked among enzyme chemistry and produced the first chillproof beer in Milwaukee. Before joining Schlitz in 1911, he was chemist, instructor, and vice-president of the Hantke's Brewers' School. During the prohibition era he worked part time at Eline's Inc., producers of chocolate and cocoa. Active in many German Societies in Milwaukee, he also had an interest in library matters. He is a member of many national and local chemical, engineering, food and brewing associations. His hobbies are stamp collecting and gardening. (Adapted from THE AMALGAMATOR, Jan.'58)

SIGNIFICANT QUOTATIONS

Editor's Note: This new feature contains comments on various subjects by Academy members and kindred souls (usually excerpts from speeches or articles too long to be published entire) which may be of interest. -- W.E.S.

FARRINGTON DANIELS - "Chemists can contribute more to the world than merely more plentiful materials, more mechanical energy, more physical comfort, and better health. I have been impressed at every international conference that I have attended in Europe, in Asia, and in America, at how easily minds from all over the world work together with understanding and friendliness. Chemical discoveries come from all nations and flow to all nations. By tradition chemists are internationally minded; they are trained to act on the basis of facts rather than emotions. With its present political tensions and its potential for complete military destruction, the world needs the help which men trained to act on the basis of facts, rather than emotions, can give.

"The astonishing exchange of experts in every field around the world today is a phenomenon of our times which indicates that underdeveloped areas may be developed and undersupplied areas be supplied and political tensions eased. It is a heartening thought that by foreseeing and perhaps somewhat forestalling the too-rapid end of our fossil fuels and by furthering new sources of energy, we may be contributing a small bit not only to the prosperity, but to the peace of the world. Peace is a positive undertaking furthered by the solving of many kinds of problems. May we chemists wholeheartedly contribute to the task. Let us join with others in using the spirit of service and international cooperation which we have in our own science to improve the welfare of the world." --Priestley Medal Address, ACS, 1957

* * *

ELLIS P. JENSEN - "If we want a continuing prosperous and strong economy--and who does not--we must elevate more and more young people beyond the high school level to the college and university level of achievement. Moreover, we must invest important monies in basic university research which leads to the production of new wealth. ... And in so doing we will not deplete our state treasury, but add to it as the years go by. Our highly educated people, streaming forth in increasing numbers, will add, year by year, to the quality and the quantity of our gross state product. The higher personal compensation they will receive for such valued services automatically will become higher taxable income to our state treasury. Among all the arguments we can make for strong state support for higher education, we surely can add this argument--it is good business for the state. It pays out." --"The goose that lays the golden egg," Wisconsin Alumnus, Feb.'57

* * *

HAROLD KRUSE, Editor of Narrows Creek Ripple - "In developing a well-rounded conservation program--soil, water, woodlands, and wildlife--we must not forget the fifth factor--beauty. Wisconsin has its state parks, preserved and managed exclusively for their scenic and recreational values, but these are merely isolated islands of beauty in the overall landscape. The true beauty of our state lies in its farms and woodlands, its lakes, streams, and marshes. It is difficult to picture a more pleasing scene than that presented by a healthy, prosperous and well-managed Wisconsin farming community, with its attractive farmsteads,

abundant crops and healthy livestock, its contoured fields and well kept woodlands, fencerows, ponds, and streams abounding in birds, mammals, wildflowers, and aquatic life. Such a scene also includes healthy and happy people, our most important resource. It is the goal toward which we in the watershed associations work." -- Quoted by J. W. STEVENSON, Work Unit Conservationist, Baraboo, at Inter-Agency Conf. on Watershed Activities in Wisconsin, August, 1957

* * *

HELEN C. WHITE - "The fact is that truth in any age is hard to find, and wisdom more difficult of compass than the world's wealth. In the free give-and-take of the University students get a vision of what a life-long undertaking the pursuit of both is. Indeed, I think that that is the most valuable thing we give them on this campus. For there is only one thing more important than the preservation of freedom, and that is its use. That is why I like so much that sentence of the Board of Regents' Resolution of December 8, 1956. 'The search for truth is the central duty of the University, but truth will not be found if the scholar is not free, it will not be understood if the student is not free, it will not be used if the citizen is not free.' In other words, freedom is the first business of all of us. That is, in a word, the heart of our Wisconsin Tradition of Academic Freedom." --Main address at ceremonies rededicating the Freedom Plaque, Bascom Hall, University of Wisconsin, Feb. 15, 1957

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J. MARTIN KLOTSCHE - "Certainly a reduction in illiteracy has not resulted in our devising a more intelligent way of living. For if a close correlation had existed between literacy and intelligence, then we should have witnessed in recent years a decline in war, civil strife, crime, delinquency and general social maladjustment. Yet quite the reverse is true for this highly literate 20th century of ours has also turned out to be the bloodiest and most turbulent in the history of mankind. Thus we find ourselves today among the most highly educated people in the world. Yet at the same time we seem incompetent to deal with the immediate problems at hand. Technologically we have moved forward at the terrifying speed of a jet-propelled plane but our social behavior is still moving at the slow pace of an ox-cart. Our technical competence is superb but we have neglected other competencies of equal importance." -- Honors Convocation, University of Wisconsin, June 21, 1957

* * *

FRANK LLOYD WRIGHT, dean of American architects, recently had this to say about the use of wood in modern home construction: "Wood is a friend of mine. The best friend on earth of a man is the tree. When we use the tree respectfully and economically, we have one of the great resources of the earth. Use wood as a beautiful material, friendly to man; the supreme material for his dwelling purposes. If a man is going to live, he should live with wood. And he will live more happily with wood than with plastics." -- Quoted in Timber Producers Bulletin, Feb. 1957

* * *

FRED O. PINKHAM - "Faith and freedom go hand in hand. One is rooted in the other. By his very nature, man must live by a hope for something better, not from fear of something worse. Freedom grows from faith and love, not from fear and hate. It is faith and love which moves us to conquer mountains, not fear and hate. Americans are not afraid and we hate no one. We envy no one. We covet no other nation and no other way of life. We are free and we have faith. No man is free who is afraid and

full of hate and greed, and no man is afraid who is free and has faith in himself, in his brothers, and in his God." -- Homecoming Day luncheon, beginning 125th anniversary celebration of Kalamazoo College, Michigan, October 5, 1957

* * *

SCOTT M. CUTLIP - "Journalism training is quite sufficient to prepare a writer of publicity releases. We still have too many teachers who confuse the tool publicity with the total of public relations. And in this they merely reflect the limited thinking of many practitioners. ... We believe, on the basis of a decade's experience at Wisconsin, that the best preparation for the public relations specialist is a broadly-based liberal arts education oriented to a small core of basic courses in public opinion, public relations, and communications. We have only five specified PR courses. We doubt more are needed. We doubt, too, that there is sufficient specialized knowledge for more at this moment. ... At Wisconsin we recognize that tomorrow's PR practitioner must be a skilled analyst of public opinion, a skilled specialist in communication and a person equally versed in the substantive knowledge of the field in which he works. We know a person cannot intelligently interpret that which he himself does not understand. To provide a foundation for this requisite knowledge, we send our students to great teachers in the departments of economics, history, commerce, psychology, and political science.

"... On the other hand we at Wisconsin do believe that a meaningful preparation for public relations--consisting of studies in liberal arts, communications, and public opinion analysis--is most logically centered in, but not confined to the school of journalism or communications. Such a program has to be centered in some division of a university. Otherwise there would need to be sequences in public relations in our schools of business, education, government, social work ad infinitum. ... Let's get these two facts straight: The guts of mature public relations practice is communication; empathetic listening and persuasive communication. And today's school of journalism is the center of communications study and research. ... Let us never forget: 'Today's preparation governs tomorrow's progress.'" --Remarks at Roundtable on "Education for Public Relations" at 9th Annual Public Relations Conf., PRSA, Milwaukee, Nov. 28, 1956

* * *

EMIL TRUOG - "The organic matter in soils is the food on which myriads of beneficial microorganisms live. Their number in a thimbleful of fertile soil is usually greater than the number of people (2¼ billion) on this earth. These organisms lend life to a soil. They help to make nutrient elements available to plants, and produce substances which promote the desirable granular condition of soils. Without them, a soil would become stagnant and dead. Organic matter is sometimes called a 'cure-all' for 'sick' soils. Its presence not only promotes the desirable biological condition mentioned above, but also improves the physical condition of soils, and thereby increases the infiltration rate of water into the soil, and thus, lessens runoff and erosion. In addition, the availability of all of the nutrient elements for crops is promoted. The possibility of adding more and more organic matter to soils in the form of animal and green manures is greatly aided by applying lime and fertilizer whenever needed so as to promote high yields of the crops which must serve as the original source of organic matter." Bulletin 516, June 1955, "Organic Matter Improves the Soil," Univ. of Wis.

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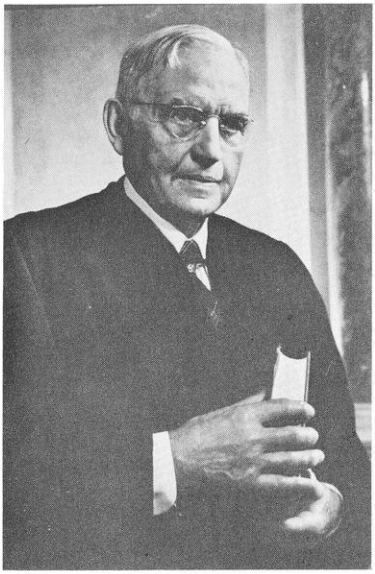


Karsh of Ottawa

In Memoriam

Marvin B. Rosenberry - 1868-1958

Wisconsin's most venerable citizen and member of the Wisconsin Academy, MARVIN BRISTOL ROSENBERRY, died on February 15, 1958 after a long and fruitful life. He was born in River Styx, Medina Co., Ohio on February 12, 1868. Lincoln's birthday was doubly meaningful in his life--and he also shared Lincoln's gentlemanly manner, humility, strength of character, faith in democracy and ability to spin yarns.

Reared on a farm near Fulton, Kalamazoo Co., Michigan, Rosenberry first attended Michigan State Normal School at Ypsilanti and later transferred to the Law Department of the University of Michigan from which he graduated in 1893. He had become acquainted with Wausau, Wis. two years earlier on a chance visit to assist a relative and so he began the practice of law there on August 23, 1893. From 1902 through 1908 he was City Attorney. On February 12, 1916 he was appointed Associate Justice of the Supreme Court of the State of Wisconsin, to which position he was re-elected several times, resulting in his service for 34 years in this capacity. He became Chief Justice on March 23, 1929 and continued for the record length of 21 years until his voluntary retirement in 1950. The Milwaukee Journal said of him: "His decisions helped write history. He wrote the first decision upholding the eight hour day in Wisconsin, and his decisions are read in law schools throughout the country."

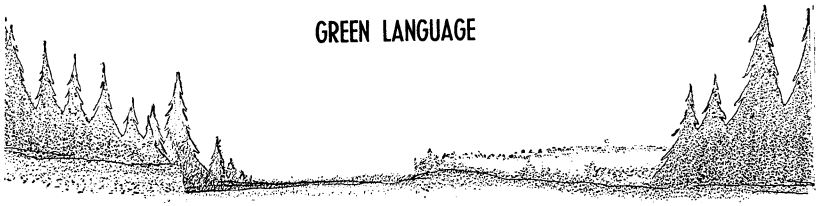
Besides his significant contributions in sound decisions and his scholarly studies in constitutional and administrative law, Rosenberry freely contributed his energy and ability to civic and community projects. He was one of the founders of the Madison Community Union in 1922 and remained honorary President of their United Givers' campaign over the years. In 1926 he was President of the Wisconsin Conference on Social Work and in 1937 he was awarded the B.S.A. Silver Beaver for service to Scouting which continued unabated throughout his life. In 1950 he led the study of legislative districts which successfully resulted in the "Rosenberry Reapportionment Plan" which helped reshape the structure of Wisconsin's representative government. Honorary degrees were conferred upon him by Beloit College, Marquette University, the University of Michigan, Michigan State Normal College, Nashota House and the University of Wisconsin.

He is survived by his wife, Lois Kimball Rosenberry (nee Mathews) formerly a U. W. Professor and Dean of Women, and a son, Samuel L. Rosenberry, a counsel for the New York Stock Exchange. -- Walter E. Scott, with permission, from copyrighted Milwaukee Journal story, Feb. 12, 1958, and other sources.

# # #

DOMAIN OF LETTERS

Academy member RUTH MOREHOUSE of Woodruff generously lends her permission for publication in the Review of another of her distinguished, veritably speaking regional poems.



GREEN LANGUAGE

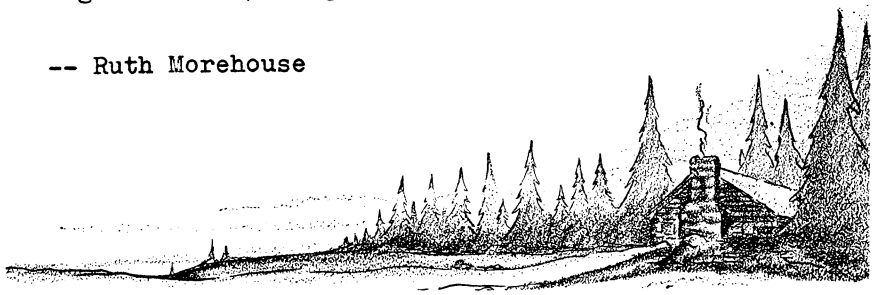
Sometimes a snowstorm catches on a word;
Sometimes across a phrase wild geese are seen;
Sometimes a sentence will be water-blurred;
But mostly here the language will be green.

Within this county speech is shaped by trees:
You'll hear the sound of balsam on a tongue;
Around the breath there is a cedar frieze;
From small winds caught in spruce the voice is sprung.

No matter what we speak of, trees are there
Thrusting their way up through a sentence, leaning
Over the words we say as if to share
With us a deeper-rooted, greener meaning.

And as speech mirrors bough and living steeple,
A green dimension grows within a people.

-- Ruth Morehouse



THE COLOR IN OUR LIVES

By Thomas K. Kingery

Editor's Note: Incredible as his literary activity may seem, THOMAS KENNETH KINGERY, who lives on a picturesque knoll near Stoughton, Wisconsin, is the victim of extreme paralysis. Reduced to the exercise of his voice and of one forefinger, he tape-records, revises, and rephrases with telling directness and a rare good humor. "The Color in Our Lives" is an excerpt from one chapter of Mr. Kingery's autobiography, now well along in its preparation. Critics confidently predict a wide popular response to this book. The volume will deal with his childhood, his career in college as athlete and observant man about the campus, his war service in India and China, his marriage (now most richly comforting and inspiriting!), and his basic philosophy--bracing and heroic beyond estimate. No notice of Mr. Kingery's work can properly fail to offer tribute to his charming devoted wife; and he is always the first to make that acknowledgment, with just the right note devout. -- Ralph A. McCanse

It happened to me. In October of 1952, I contracted poliomyelitis and was confined to an iron lung within four walls of a hospital room. Although I progressed from the hermetically sealed existence of an iron lung to the relatively open and spacious rocking bed, the weakness of my breathing muscles prevented my leaving the hospital building for nine months. Then I came home and stayed for the most part in the house for the next three years. My only travelling came when I was transported on short trips to town, to the dentist's office, or to the homes of neighbors.

In the summer of 1956, the travel bug bit me, and I set forth to rediscover my country after a four-year "absence." Though still paralyzed from the neck down, I was taken to church, with the family out for dinner, out on dates with my wife, and to movies, carnivals, and horse shows. We even got as far as Milwaukee and Chicago several times.

The world outside my home had changed in many ways. Probably the greatest revelation to me was the amount of color which has pervaded our lives. Something many of you must long have taken for granted struck me at first

glance as both a novel change of color and a most sensible idea. I discovered that stop signs are now red. Three years ago they were the same yellow as most other highway markers; painting them red certainly makes them stand out. Mailboxes were another revelation. They used to be dark green, and darned near impossible to find against the conventional background of bushes, trees, grass, etc. Now, wonder of wonders, they are a brilliant red, white, and blue.

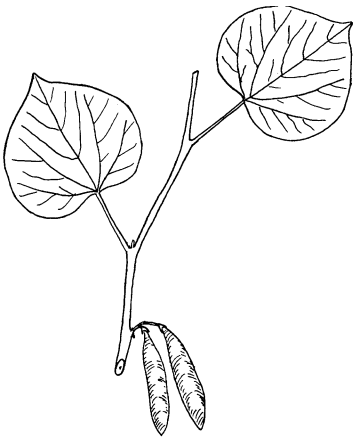
How much color has come to our land! The mailboxes, stop sign, and gleaming two-toned automobiles are relatively small things. I've been driven through sprawling suburbs with neat and shining houses of light green, bright green, pale pink, bright red, and even such exotic tones as chartreuse, turquoise, and cocoa. Houses in bright colors were coming along in 1953, before I stepped off the local scene, but now there are whole subdivisions of them; and they are so tastefully intermixed and harmoniously trimmed as to delight the eye. In my childhood days a house was either white or brown (in varying shades and degrees of cleanliness) or red brick. Now one may drive for block after block seeing modern houses painted in vivid contrasts or pastel blends ranging through the entire spectrum of color. Color has also come to the large buildings in the big cities. Giant office buildings are now going up with luminous blue walls, green walls, or with sides of copper or burnished aluminum. The net effect is most pleasant to one who was accustomed to walking through the granite caverns that typify our city streets.

The great increase in the use of bright colors in our lives seems quite symbolic today. More and more, manufacturers of soaps and detergents and toothpastes and cigarettes employ bright colors as a means of catching the customer's eye. One of my most enjoyable visits was to a recently re-decorated drugstore here in Stoughton, owned and managed by our next-door neighbor. The vivid and varied array of colors on his display shelves was something wondrous to behold. It was a cheery sight. I don't know how anyone can go with a long face into a drugstore or supermarket. That is the really symbolic thing about the vast quantity of color which is now an integral part of our daily life; we are cheerful people and we like to surround ourselves with cheerful colors. Contrast this with the drab life of China and India, where I was stationed during World War II. In these countries the predominant color is brown. Brown on brown and brown after brown. Yes, our entire landscape has become brighter and brighter, and it seems to me to indicate a fierce faith in our way of life--and its future.
--(This is an abbreviated version of the essay "Modern Rip Van Winkle.")

# # #

INFORMATION PLEASE!

IS THE REDBUD NATIVE TO WISCONSIN?



The Redbud or Judas Tree (Cercis canadensis L.) is a conspicuous understory shrub in eastern deciduous forests. Its rose colored flowers appear before the leaves and impart a brilliant color to these forests in early spring. Although frequently planted as an ornamental about homes and in parks, it is apparently absent from native deciduous forests of Wisconsin. Reports of its occurrence in natural habitats have appeared from time to time, but verification is lacking. Some reports are old and the plants, if correctly identified, may have since disappeared.

The 8th edition of Gray's Manual of Botany lists the range of this plant from northwest Florida to Texas and northeastern Mexico, north to southern Connecticut (local), southeastern New York, Pennsylvania, southern Ontario, southern Michigan and southern Wisconsin. Evidence for the range in Wisconsin is not explained by that author. From early surveyor's records, the late Prof. NORMAN C. FASSETT noted a report of this shrub southwest of Platteville in Grant county. Whether he visited this locality is unknown but he never listed the Redbud as a native species in his Spring Flora of Wisconsin or Leguminous Plants of Wisconsin. The 1949 Yearbook of Agriculture, "Trees," does not show its distrubtion but does contain the range of an accompanying species, the Flowering Dogwood (Cornus florida L.). In this reference, it appears to extend into the extreme southwestern portion of the state. Since both of these species occur together in similar habitats and have almost the same areas of distribution, it is possible that the Flowering Dogwood as well as the Redbud may be present in southern Wisconsin.

During the latter part of August, 1957, when Prof. HUGH ILTIS of the UW and the writer were on a botanizing trip, we visited Wyalusing State Park in Grant county. There we noted some recent plantings of Redbud and were informed that they were grown from seeds supposedly collected near Cassville. At Cassville we secured more specific directions. The site--a wooded bluff above the Mississippi river about nine miles northwest of Cassville--was quite isolated and was reached by way of an infrequently traveled gravel road. After exploring the area for several hours and almost conceding defeat, we discovered a single fruiting shrub close to the base of the bluff. This plant was about 8 ft. in height and the largest branch had a diameter of nearly 4 in. Several specimens of leaves and fruit were collected and are now in the herbaria of the UW and UW-M.

On the basis of this single plant as well as various reports, it is still questionable whether this shrub is native to Wisconsin. It seems that this specimen was not planted, and other plants may be found in that vicinity and elsewhere in Grant and adjoining counties. Any further evidence of occurrence in natural habitats of this shrub in Wisconsin would be greatly appreciated by Prof. Iltis and the writer. -- PETER J. SALAMUN, Asso. Prof. of Botany
Univ. of Wisconsin-Milwaukee. # # #

AN INVITATION TO FERNWOLD

By Margaret S. Bergseng

(Mrs. Bergseng is one of the talented Schmidt family of naturalists. For some years she was associated with the U.W. Botany Dept. but has recently moved to California where she is a Seed Analyst with the State Dept. of Agriculture. Her invitation to visit the family memorial woods is taken from letters to the Editors. Both Franklin and her mother died in the 1935 farm home fire which she mentions, and her brother Karl, Chicago Natural History Museum herpetologist, succumbed last fall after being bitten by a South African tree snake.)

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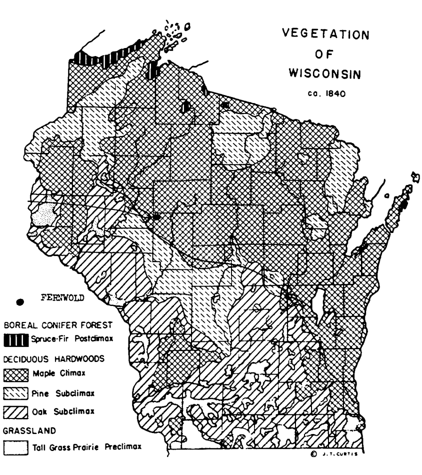
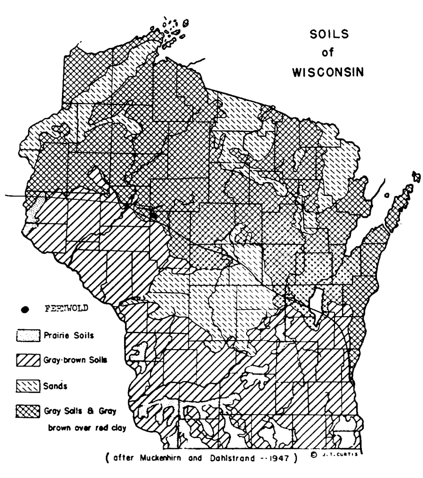
Some day when you are in Clark county in the northwest corner, you might like to visit our woods. I would recommend May 15 for the millions of *Trillium grandiflorum* with a scattering of *T. cernuum*. Around May 1 the Hepaticas carpet the woods and are so fragrant, along with the spring beauties. A bit later the yellow and white Trout lilies (*Erythronium*) are a sight to see. *Viola Selkirkii* is there, and *Viola pubescens*. *Viola pallens* grows in the creek immediately back (west) of the woods in the pasture. Everything is there that belongs in a sugar maple, yellow birch, basswood, elm *and* white pine woods!

One summer I identified about 15 species and varieties of ferns in the 40 acres--because of which, incidentally, the name "Fernwold" was chosen. *Botrychium matricaraefolium* was found just a few summers ago, and *Dryopteris Goldiana* is the rarest. In September the maples are at their best in reds, yellow and orange.

The woods is in a strategic location where soils and vegetation, temperature and precipitation, change in a roughly diagonal line from northwest to southeast corners of Wisconsin. There were originally islands of white pine in the low, rocky places. Maples grew on the clay loam ridges. My uncle cut pine six feet across on his farm across the road from ours. The





lumber company (from whom we bought the place in the late 1890's) had removed the big pines (and white oak) before we got it. A few nice ones are left back in the northwest corner. Rather a rare thing to see, nowadays at any rate, is the predominating stand of rock or cork elm (Ulmus Thomasi). The best were sold for piling in the Mississippi river flood control project around 1920, but a few really large ones are left. I took a boring and the largest is at least 137 years old--I did not get to the center! The maples are around 200 years old.

There are birds galore, 'coons, chipmunks, squirrels--even a red squirrel has come back after an absence of many years when the place was farmed. There is always a pair of Pileated woodpeckers nesting in season.

We used to make maple syrup years ago but have stopped most activities now, in an attempt to keep the woods "as is." There has already been too much disturbance from wind "blows" and any disturbance of the leaf mold is bad. Rarest of the mammals, the Pine Mouse (collected by Franklin before 1935), burrows in the leaf mold just below the surface, so that even walking disturbs its tunnels. However, a few investigational ecological projects would be all right and we would all be proud and happy to have Academy members visit the woods. It is a part of the Schmidt Memorial Game Refuge of approximately 100 acres in the Town of Worden, Clark county (S½ NE¼ and S½ NW NE¼, Sec. 18, T 28 N, R 4 W).

From Fairchild, the way runs north on county trunk H to the crossroad east into Clark county, a mile south of the place. There is no resident caretaker, but John M. Schmidt, 1751 Cedar Road, Homewood, Ill. is the principal "user" of the property. Adjoining pasture is rented out.

There is now a bronze memorial plaque to the memory of Franklin J. W. Schmidt, Margaret J. Schmidt and George W. Schmidt. It is attached to a rough granite rock which served as the front step to the farm home which burned in the night on August 8, 1935. We hope that some day the 40 acres of original sugar maple, red oak, basswood, rock elm, ironwood and butternut with yellow birch scattered throughout, which have been kept as a natural area by the remaining members of the family may belong to the precious Natural Areas in the Wisconsin roll of rare and beautiful places.

On the plaque is Goethe's poem in German, a favorite of my father's: (Longfellow's translation was quoted from memory by Prof. Max Otto for me)

On all the hilltops
Is quiet now.
In all the treetops
Hearest thou
Hardly a breath;
The birds are asleep in the trees:
Wait; soon like these,
Thou too shalt rest.

# # #

THE TREES FOR TOMORROW STORY*

By Folke Becker, President
Trees for Tomorrow, Inc.
and
Board Chairman, Rhinelander Paper Company

My subject is Trees for Tomorrow Inc. -- a non-profit, industry organization sponsored by 13 Wisconsin paper mills and five power companies. The story of Trees for Tomorrow is that of a concerted effort between industry, public agencies, the University of Wisconsin, State Colleges, many other organizations and individuals to advance resource management.

Trees for Tomorrow is dedicated to helping to grow a vast new forest across Wisconsin's millions of acres of wastelands; helping landowners manage thousands of acres of our second growth forests; teaching wise resource management to ever increasing numbers of Wisconsin's citizens--students still in school, others in all walks of life.

On a crisp and sunny October day 14 years ago a long line of trucks loaded with pulpwood rolled into the square at Tomahawk, Wisconsin. This supply of wood, during the critical man power shortage, came in response to the work of the north central Wisconsin Victory Pulpwood Committee in getting wood out of the forest and to the mills for strategic war materials. Members of the committee thought that if so much could be accomplished for the war effort, something could be done about growing more local raw material for peace time supplies.

Early the next spring, a few mills in the Wisconsin Valley organized Trees for Tomorrow. For years the pulp and paper mills had believed that more could be done to put idle acres to work, that better management of existing stands would mean increased income for Wisconsin landowners, that wise resource management should be taught to our young people who will one day take over the management of our farms and forests, business and government, schools and social problems.

In the beginning, our work was limited mainly to the Wisconsin Valley. Now, our activities have expanded to 14 northern counties, and projects have increased from the distribution of trees to forest management, machine planting, and the operation of the Trees for Tomorrow Camp at Eagle River.

We have found that the distribution of free trees is the most effective way to interest people in forestry and good forest management. Under the free seedling tree program, a thousand trees are given a landowner each year for two years. During that first year, Trees for Tomorrow had to use newspaper advertising to make known the free seedling tree program; our territory was

* - Excerpts from talk presented at 82nd Annual Meeting, American Forestry Association, Madison, Wis., October 1, 1957.

limited to six counties; and the first Camp season was a trial run of only three days. Now, after 13 years, during which time we distributed 7 million free trees among 6,000 landowners, we have made a comprehensive survey to find out what impact this program has on the overall reforestation of the state. We discovered that 10% of the private landowners in Wisconsin who bought trees from state nurseries this spring had at some time received free seedling trees from Trees for Tomorrow; also, this same 10% put in 20% of the trees planted in the state by private landowners this past spring. The most significant result of distributing free trees is that, since 1944, those landowners who received the 7 million free trees have bought another 25 million trees themselves.

On many tracts management is more essential than tree planting. When a landholder requests a management plan, a Trees for Tomorrow forester, with the aid of aerial photographs, makes an in-the-field reconnaisance survey as the first step in drawing up the plan. Maps are then drafted showing the present status of the land and the future that is possible for it, with a plan of management for a ten year cycle, and suggestions for reappraisal at certain intervals. Included in many of the plans is a design for water retention and information on wildlife management for the tract. A landowner pays the small charge of 10¢ per acre for these plans. If he requests estimating and marking for harvest, a fee of $2.50 per hour is charged.

A surprising and interesting trend is the fact that absentee landowners have also been putting thousands of acres under forest management. This is a significant trend since they own three million acres in northern Wisconsin. Since 1946, more than 200,000 acres have been put under management for schools and for private landowners. No fees are charged for school forest management plans. School forest plans also include instructional aids for integrating conservation with classroom work. Under the Trees for Tomorrow machine planting program technical assistance is offered free, although a charge of $3 an hour is made for the use of the machines. . . . .

Located on the fringe of the Nicolet National Forest, at Eagle River, Wisconsin, Trees for Tomorrow Camp was originally built by the Forest Service as a training station for foresters during the middle 1930's. Some ten years later when it was no longer in use, Trees for Tomorrow leased it and it is now operated on a 30-year lease from the U. S. Forest Service. During the season, which runs from mid-March to mid-November each year, 3,500 people from all parts of Wisconsin see, first hand, the inter-relation of our soils, forests, water and wildlife. At Camp they study modern techniques of managing these resources. Each year 1,200 high school pupils come to Camp from schools throughout the state for a series of three-day conservation and forestry workshops, on school time; 400 county college students have their own series of workshops. At the five weeks' accredited conservation summer workshops sponsored by State Colleges, teachers can earn six credits in biology and field sciences. At a two and a half weeks' workshop teachers earn three credits. We are convinced that the work we are doing with teachers is of most importance. At Camp teachers draw up methods and projects to use in their own classrooms and in their own school forests.

More than a hundred field technicians and conservation specialists from industry, public agencies, State Colleges, and the University of Wisconsin volunteer their services as instructors and tour guides. Field tours by bus take the groups to a number of established tour stops where classes are held along streams, across fields, and in the forest. Altogether there are 45 education specialists and 54 field technicians (fish and game biologists, foresters, water engineers, soil conservation aides, conservation wardens, farm owners, and technicians from industry) who conduct demonstrations and interpret their daily work to groups on field tours.

Our advisory committee--made up of administrators of U. S. Forest Service, the State Conservation Department, the University of Wisconsin, the State Soil Conservation Committee, the State Colleges--meets twice a year to help determine long range policies. Service clubs, bankers, the Federation of Women's Clubs, garden clubs, and many other groups come to the Trees for Tomorrow Camp. During the month of September--just past--there were 40 extension specialists from the University of Wisconsin, Minnesota and Michigan; 27 first year classmen from The Institute of Paper Chemistry in Appleton; 25 leaders of sportsmen's clubs in Wisconsin; approximately 50 from the Wisconsin Press Association; 24 members of the U. S. Forest Service Club of Milwaukee; 20 Council of Forestry Association executives, besides the students attending fall workshops. Programs are geared to the interests and vocations of those who come to Camp.

For example, 120 teachers who attended five weeks' workshops at Camp have taught conservation to more than 4,000 pupils. As an extra dividend--the resource teaching units, which these teachers had prepared at Camp, were also used by nearly 500 other teachers.

A retired mink rancher, who had neglected his forestry holdings, wanted to know what his unused forest land was worth, and asked Trees for Tomorrow to make a plan. His first thinning operations netted him $2,500; and his property is in better condition than before.

Progress made can be gauged by the fact that in 1944, Wisconsin imported 80% of its pulpwood. In 1956, imports were 55%. However, there are still two million acres to be reforested and 14 million acres that, for the most part, require more intensive management. In the new and different age of the next quarter century, natural resources will play an ever increasing role, not only as a broad background for recreation, but also as raw material for countless new products in a yet-undreamed-of standard of living 25 years from now.

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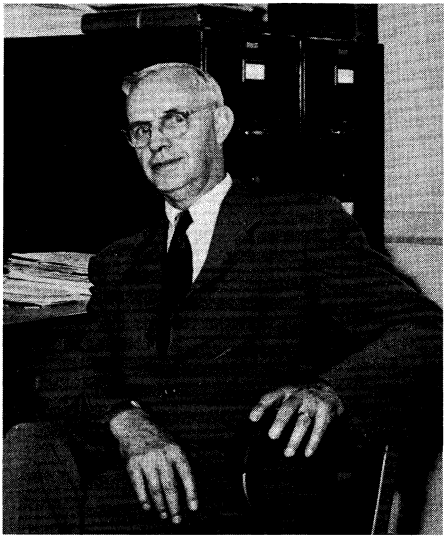
Entrance to Trees for Tomorrow Camp, Eagle River, Wisconsin.



M. STARR NICHOLS—BIOCHEMIST

A UW Retirement Profile

M. STARR NICHOLS, assistant director of the Wisconsin State Laboratory of Hygiene at the U.W., reached retirement age last year and was voted emeritus status by the Board of Regents, but has remained at work on a contract basis. He first described the value of fluorides in water in a paper for the American Public Health Association in 1938 and has been a leader in the fight for water fluoridation in the state.

Beginning his career 44 years ago as a student assistant at the State Laboratory, he moved with the laboratory from the top floor of South Hall eventually to its present modern building on campus. He also advanced in position to become assistant director in 1949. At the same time he advanced from assistant professor of sanitary chemistry to associate and then full professor in 1940. He taught one of the first courses in sanitary chemistry to civil engineers. His main interest remains water fluoridation though his research and published papers extend into other aspects of public health, water and waste sanitation and water analysis. He plans to continue research on fluoride content of human bones.

Born in 1887 in Fairmont, Missouri of sturdy Quaker stock, he received a degree in pharmacy from Highland Park College, Des Moines, and entered the University of Wisconsin in 1912, where he received B.S., M.S., and Ph.D. degrees. During World War I Nichols served as an officer in the Sanitary Corps, U.S. Army. He has been a member of several standard methods committees of American Public Health Association, American Water Works Association, and Federation of Sewage and Industrial Waste Associations. His most recent article, on natural strontium in Wisconsin waters, was published in the November 1957 issue of the Journal of the American Water Works Association.

A fellow of the American Institute of Chemists, the American Public Health Association and American Association for Advancement of Science, he is also a member of the American Chemical Society, several water works and study associations and Sigma Xi. He has been a member of the Academy since 1935. In 1955 he received the Charles Alvin Emerson medal for meritorious service from the Federation of Sewage and Industrial Wastes Association.

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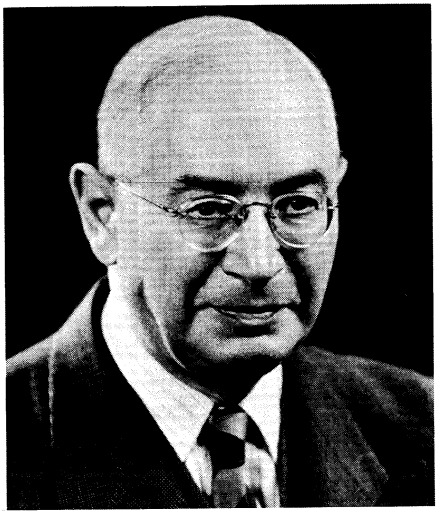

GEORGE URDANG — PHARMACIST-HISTORIAN

A Retirement Profile

GEORGE URDANG, pioneer in the history of sciences and professions as a special field of study and research at the University of Wisconsin, last fall retired from an active role in the American Institute in the History of Pharmacy. He had helped found the Institute in 1941, shortly after coming to Madison, a refugee from Naziism. Until September 1957 he served as executive director in its offices at the U. W. School of Pharmacy, when he was named director-emeritus.

In June 1957 he was honored at a banquet observing his 75th birthday. At that time an oil portrait of him, commissioned by Parke, Davis & Company, was unveiled. Several tributes by colleagues cited his contributions as an author-historian, "an accomplished and inspiring teacher," the internationally important role he plays in the historical movement in the pharmaceutical field, and his influence on pharmacy. On display during the program were books written by Urdang, plus bulletin boards containing honorary certificates, diplomas, and medals which he has earned.

With Professor Edward Kremers, he wrote the standard "History of Pharmacy." In 1947, Urdang was given a U.W. appointment as professor of the history of pharmacy. He retired from that post in 1952, upon reaching retirement age, but continued his work as director of the Institute until last year. He has been affiliated with the Academy since 1943.

Prof. ARTHUR H. UHL, dean of the U.W. school and chairman of the Institute's Council, said , "It has been largely his ability that developed the institute into a cultural center serving American pharmacy uniquely but also commanding respect internationally."

# # #

FREE FOR THE ASKING

Recently a sizable collection of reprints from various issues of the TRANSACTIONS has been discovered in the Academy library. It is desirable to make these available to the members without cost and a single copy of each will be sent to members on request. Authors are invited to write for more copies or the entire remaining supply after requests have been filled. The number at the end of each listing indicates the volume of the TRANSACTIONS in which the article appeared and approximate date of article can be calculated from Vol. XX of 1921.

Send your request for copies to Miss Laurel Nelson, Exchange Librarian, U.W. Memorial Library, Madison 6, Wisconsin. The following listing indicates only items on which 10 or more copies are available. Listings of other articles may be made in future issues.

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POSITIONS (Continued from page 96)

ROBERT E. GARD is Pres. of the new Wisconsin Arts Federation and Council and S. JANICE KEE and ALLEN P. NELSON are Directors. ... WILBUR M. HANLEY has been elected Pres. of the Wis. Polled Hereford Assn. ... LINDLEY J. STILES heads the National Society of College Teachers of Education. ... LE ROY PETERSON is Pres. of the Wis. Education Assn. and Co-editor of The New Campus for the National Assn. for Field Service in Teacher Education. ... FRED TRENK is Sec'y-Treas. of the Wis. Tree Producers Assn. ... MERLE CURTI is the new Pres. of Wis. Chapter, Phi Beta Kappa. ... Academy members appointed by UW Pres. E. B. FRED to a Committee for an Art Center and Galleries on the Madison Campus include: D. A. BAERREIS, MERLE CURTI, MARK INGRAHAM, MENAHEM MANSOOR, ROBERT POOLEY and LINDLEY J. STILES. ... CARL P. FRISTER, STANLEY POLACHECK and DANIEL Q. THOMPSON are Pres., Vice-Pres. and Treas. respectively for the Wisconsin Society for Ornithology. ... Dr. HANS H. REESE is a Trustee for the Am. Neurological Assn. ... WALTER H. EBLING is on two Advisory Committees for the Census of 1960--Agriculture and Population. ... ROY E. NICHOLS has been appointed Chm. of the Policy Committee, Am. Assn. of Veterinary Nutritionists.

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JUNIOR ACADEMY NEWS

JUNIOR ACADEMY REPORT

By John W. Thomson, Chairman
Junior Academy Committee

The most important news from our Junior Academy is that our Co-president, JANE KARAU of Columbus High School, Marshfield, was selected one of the 40 highest young scientists of the nation in the Westinghouse National Science Talent Search operated by Science Clubs of America. Jane's project on the use of native plants in home dyeing is one on which she has been working for several years, with many hundreds of experiments recorded to test the materials and their behaviour under different conditions. The report on her project which gained her recognition as a state winner in the Junior Academy meetings last year is reproduced in this issue of the Academy Review. Jane is the third of our Co-presidents to be selected for this honor and the fourth national search winner from Columbus High School, Marshfield. Sponsor of their Science Club is SISTER MARY LAURETTA, a member of the State Committee of the Junior Academy.

Honorable mention in the National Science Talent Search was accorded to DANIEL GOLLNICK of Central High, La Crosse and to PETER OWZARSKI,Jr. of D. C. Everest High, Rothschild. After the papers and project reports are used in the National Search, they are forwarded to the Wisconsin Science Talent Search Committee of the Wisconsin Academy for use in the state search. Results of the state search will be announced by the chairman of the committee, ROY CHRISTOPH of Carroll College, at the Academy Annual Banquet on May 3 at Whitewater.

On May 17 the statewide meeting for science students of the 7th, 8th and 9th grades will be held at McKinley Junior High School, Kenosha. Last year over 55 papers were given, and the larger number expected this year will be given in several simultaneous sessions. The Science Club of McKinley Junior High (LUCILLE TURCO, President; SUSAN WEDELL, Secretary; and Miss CATHERINE BEHRENS, Sponsor) has been very busy with arrangements. We hope that as many Senior Academy members as possible will attend some of the sessions so that they will encourage these young scientists of Wisconsin. Many of them will be rising through the years in the Junior Academy and a surprising proportion are destined to become professional scientists. A study by Miss MARY DOHERTY of the Bradford High School, Kenosha, in cooperation with the Seminar Club has shown this to be true. We hope that the results of this study will be made available to the Academy members in a forthcoming issue of the Review.

Academy members in the Fox River Valley may like to know of an additional Science Fair which was not mentioned in the last issue of the Review. On April 18 a Science Fair will be held at Fox Valley Lutheran High School, Appleton. Some of our Academy members in that region may wish to attend this Fair.

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BUMBLEBEES AND THEIR WAYS

By Dale Reimer
Lincoln High School, Manitowoc

My interest in insects started even before I could read. When I was in first grade, I caught monarch caterpillars, raised them to butterflies, and then let them go. I was nine when I got my first pair of squirrels. I accidentally dropped a chrysalis into their cage one day and discovered that the squirrels liked to eat them. From then on, I fed chrysalis to them, but a few hatched out before I could feed them to my squirrels. These I mounted and thus started my butterfly collection. I finished my collection by going out and catching all the local species I could find and named them.

During the next couple of years I found, brought home, and raised a colony of paper wasps, nests of mud daubers and a nest of red ants, and watched them work and raise their young. When I was 12, I was out at Scout Camp where I found a bug that no one could identify. One of my friends suggested I name it the "badge bug" because it did resemble the scout badge. Miss Dedrick, Lincoln High school biology teacher, identified it as a "Saddle-back Hag Moth larva" from Frank Lutz's Field Book of Insects. It is quite a rare insect in Wisconsin. A year later I found a nest of darkling beetles eating fungus under the bark of a rotting tree behind our High School. I sent one to the University of Wisconsin for identification. Since they did not have one of that species, they asked to keep it for their insect collection. It was Boletotherus cornutus.

Two and a half years ago I got a pair of reticulate collared lizards. I discovered they like to eat bumblebees which I proceeded to catch for them. It was thus I discovered that there are different kinds of bumblebees around our neighborhood, so I started collecting them. I have been corresponding with Dr. Medlar at the UW, having found out quite by chance that he was also doing bumblebee research, trying to devise a practical artificial hive. Anything that can be done to increase the bumblebee population is of economic importance to our state. I have two plans in mind for this summer: first, I will test the effects of the two commonest crop sprays on them, and this fall I am going to try again to over a hive. Most people think of a bumblebee as a little black and yellow monster whose sole purpose in life is to go about stinging anything that they come in contact with. To the contrary, I found them to be quite gentle. They don't care about stinging people. I have dug out 15 nests in the last two years and kept 11 colonies for observations and given from 500 to 1000 of their occupants a chance to take a poke at me, but only three have taken me up on it. As a matter of fact, they would rather let you go your way and they go their way, which is to collect pollen and nectar to satisfy their food needs. While tapping the flowers of the nectar they are carrying on the important function of cross pollinating the flowers.

Bumblebees are the only known agents for pollinating red clover which makes them very important factors in the economy of many countries that depend a great deal on red clover for part of their national income and particularly for the enrichment of their soil. Wisconsin too depends somewhat on the bumblebees--as a matter of fact, they are responsible for the estimated $23,000 that the state makes on red clover and alfalfa. But red clover is far from the only flower that depends on them; when your lilacs are in bloom why not see how many are buzzing around them? I found that in our locality the first flowers they visit are the willow catkins and as they start withering, the bumblebees start depending chiefly on dandelions until the lilacs bloom; these then become their favorite flower.

Most people seem to know that bumblebees and honeybees are close relatives. They are, for they both belong to the order Hymenoptera which includes many social insects. But this and the fact that they both depend chiefly on pollen and nectar for food is as far as the similarities go. For instance, their life histories are quite different. We all know that a honeybee queen can live for several years but the bumblebee queen lives only one. A honeybee queen will leave the nest soon after being born and go on her nuptial flight. A number of drones take off after her, one finally catching her and ending his life after the mating. I have observed several times that the bumblebee mates on the ground. Also, the bumblebee queen leaves with only a few suitors after her and when she alights they (usually two or three) will fight over her and the winner will mate with her still on the ground. In bumblebees the drone doesn't die after mating, so he will go to find another mate while the queen will go to a soft sheltered spot somewhere near her home nest and along with her sisters (the other young queens from her nest) she will dig herself a three-inch tunnel in which, after gorging herself with honey, she will spend the long winter months.

In the spring she will come out of her little sleeping quarters and go to search for a deserted rodent or bird nest in which she starts housekeeping. Honeybees secrete wax from the ventral side of their abdomen but bumblebees secrete it from the left dorsal side. With this wax she is secreting, she will construct the honey pot and a small wax capsule about one-half inch long in which she will lay from five to seven eggs. In about three weeks the young bees bite their way out and dry out. These first workers to hatch are very small, only about a quarter inch long, and it isn't until later in the season that the workers reach the burly proportions to which we are accustomed. In the fall the drones and queens start developing and mate and start the cycle over again, so a nest only lasts a year.

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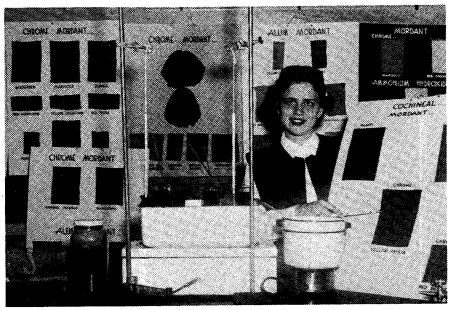
NEWS FLASH - MARCH 5, 1958

A High School science teacher whose students have won contests four years in a row has received a message of congratulations from President Eisenhower. She is SISTER MARY LAURETTA of Columbus High School in Marshfield. One of her students has won the Wisconsin portion of the Westinghouse Science Talent Search contest in each of the past four years. This year it was 17-year-old senior, JANE KARAU, who made dyes from various plants. The President's message today praised Sister Lauretta for "outstanding guidance and teaching" of science students.

NATURAL DYES FOR HOME USE

By Jane Karau
Columbus High School, Marshfield

This study was undertaken in order to investigate the colors possible for home dyeing from plant material found in Wisconsin and from some not native to the state (Table 1).



My project includes 250 dyed samples of cloth: woolen, silk, cotton, linen and some synthetics and blends, whose colors were all obtained with the use of: 1) 50 dye materials (plant and animal) 43 grown in Wisconsin and 7 not found in the state; 2) 5 mordants; 3) a zinc vat for indigo dyeing.

Since my cloth samples were only 5x7 inches, I had to reduce the dyeing recipes needed. This fortunately reduced the quantity of needed flower petals and other plant material to one pint and the dye bath to one quart. Thus I was able to run three to six tests at the same time with a double boiler arrangement I devised for this purpose (see photograph).

The dyeing process I followed can be divided into two parts: the mordanting procedure and the dyeing step itself.

Mordanting was carried out according to the cloth used. Wool and silk have the property of holding chemicals in their fibers, such as chromium oxide with which the dye stuff then combines to make a permanent color. Cotton and linen on the other hand do not absorb the metallic mordants as readily. I learned, however, that they will do so if an agent for fixing the metallic mordants is used, such as tannic acid. By using different mordants with the dye material I obtained a variety of shades and sometimes even different colors from the same dye. Yellow dahlia, for example, used with chrome mordant produced a deep orange red, but a bright yellow with alum mordant.

For wool I used five mordants: alum (potassium aluminum sulfate), chrome (potassium dichromate), tin (stannous chloride), copper (cupric sulfate), and iron (ferrous sulfate). In some tests I also included what is known as tin brightening, a finishing step in which stannous chloride is added to either chrome or alum treated cloth when dyed. Whenever copper or iron mordants were used, a saddening effect was the significant result. However, in spite of its saddening effect copper sulfate produced a very acceptable variety of greens.

Nearly all dye tests with silk and the synthetics and blends were made with alum, chrome or tin mordants. Except for tin, the method for mordanting these fabrics were the same as for wool; that is, fixing the cloth with potassium dichromate for chrome mordanting and with potassium aluminum sulfate and potassium bitartrate for the alum procedure which included an overnight standing in the mordant. Tin mordanting of silk was restricted to 15 minutes of steeping followed immediately by the

dyeing step and iron and copper mordanting gave best results with a half hour boiling time preceded by dyeing. Alum-tannin-alum mordanting used on cotton and linen, however, required three days because overnight fixing time was allowed after each step, namely boiling with alum, then tannic acid, and again alum.

For the actual dyeing step the dye solutions were prepared directly from the flower petals or other dye materials using hot water extraction. Both fresh and dried plant material was used. When larger quantities of dye extracts were made they were refrigerated until needed.

I used three methods of dyeing: 1) The sample was mordanted first and then dyed in a separate dye bath. 2) The mordant and dye were in the same bath. 3) The sample was dyed first and the color fixed afterwards, referred to as the "stuffing process," used especially for copper and ferrous sulfate mordanting. Regardless of the method used, the dyeing step was essentially the same. Cloth to be dyed was entered into a warm dye solution and then brought up to a gentle boil and continued for half an hour.

For certain dyes a mordant is not necessary. This is true of the three substantive dyes I used from lichens, fungus (tree) and the zinc vat for indigo dyeing. With the first two the dyeing is direct, but with the zinc vat the color is obtained through an intermediate reaction since the principle of the zinc vat depends on the property of the zinc dust in it to react with slaked lime to form calcium zincate and hydrogen. The hydrogen thus liberated reduces the indigo to indigo-white which dissolves in the excess lime present. Cloth dipped into this liquid turns blue on exposure to air due to oxidation. In all tests made, shades of blue were varied by controlling the dilution in the vat. The same holds true for the indigo extract made with sulfuric acid. Top dyeing with the aid of the zinc vat was another method I used for varying colors, especially the greens.

Considering the 250 dyed samples made, there is every evidence that almost any part of a plant can be used for dyeing. Sometimes the same color can be obtained from two or more parts of the plant, as with willow bark and leaves. Likewise, similar parts of two different plants may yield the same or very nearly the same colors. A typical instance is willow and apple bark.

Table 1 - WISCONSIN AND OTHER DYE PLANTS STUDIED

Berries	Roots	Leaves
High bush Cranberry	Beets	Plantain
Mountain Ash	Onion (flesh & skin)	Lily of the Valley
Barberry	Sassafras*	Willow
Sumac	Madder*	Poplar
Coffee*	Cypress*	Tea*
Nut-hulls	**Flowers**	**Bark**
Black Walnut	Goldenrod	Oak
Hickory Nut	Yellow Dahlia	Apple
Substantive Dyes	Red Dahlia	Willow
Lichens	Marigold	Fustic*
Fungus (Tree)	Zinnia	Hypernic*
Indigo*	Yellow Mums	Birch
Insect	Purple Mums	Logwood*
Cochineal*	Red Cockscomb	
	Yellow Cockscomb	
	Salvia	

* - Not native to Wisconsin.

12 tables of color results omitted for lack of space.

THE BOOKSHELF

A GUIDE TO PRAIRIE CHICKEN MANAGEMENT
By
F. N. Hamerstrom, Jr., Oswald E. Mattson
and Frances Hamerstrom

Wisconsin Conservation Dept.
Madison 1, Wisconsin
1957 128 pp. illus.
Single copies free

Prairie chickens need grass--undisturbed parcels of grassland in which they can nest and raise their young. This is their critical need, and one which keynotes their management (and their very survival) in the future.

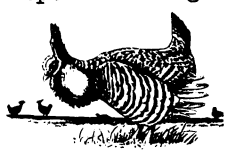
There is now very little prairie chicken habitat left in the state. And there is only one area--the Buena Vista and Leola Marshes together--in which a sizeable prairie chicken population can be saved, and perhaps a half dozen other areas in which small populations might be preserved. In their recent bulletin, the authors say that something can be done for prairie chickens--but that it must be done immediately.

They propose a management plan for Wisconsin (but which applies in principle to all states having prairie chicken populations remaining) that details the needs of prairie chickens and suggests the means for providing their necessary requirements. The plan is the outgrowth of a long program of research --a gradual fitting together of the pieces of the management puzzle from observations on booming grounds, nest and brood studies, hunting season collections, winter trapping, habitat studies, and extensive range surveys in other states and Canada.

Here is the crux of the management problem and its possible solution: The major limiting factors for prairie chickens are lack of (1) nesting and rearing cover (the most critical), and (2) winter food. Even in the Buena Vista and Leola Marshes, the best remaining areas for prairie chickens in the state, there has been a loss of nearly 5,000 acres of good and medium quality nesting cover in just two years. Further losses are a certainty.

Therefore management is urgently needed to save this population at its present level. Most important is: (1) the establishment of a scatter-pattern of grassland reserves--i.e. permanent nesting and rearing areas throughout the Marsh--amounting to about one forty per section; (2) maintenance of these areas in good condition; and (3) continuation of the present food-patch system; and secondarily, (4) improvement of other lands throughout the Marsh; and (5) maintenance of booming ground cover and winter cover. To meet these management requirements, it is fortunate that only part of any area need be under special management.

Such a management venture must be a cooperative undertaking between the local farming community and the state as a whole, including the Conservation Department and the individual contributors.



Certain safeguards for the population itself also have a place in prairie chicken management: restriction of hunting to the harvest of surplus birds when available, reduction of competition with exotic species having similar habitat requirements, and dispersing winter food supplies to discourage the spread of diseases and parasites.

One of the particularly fine sections in this bulletin is the chapter on "Ecological Patterning." Briefly, this concept means the management of a series of relatively small scattered parcels of land rather than an equal acreage in one solid block. In the case of prairie chickens on the Buena Vista Marsh, the total acreage of nest-brood cover would be far less effective if concentrated into one large field in the center of the area rather than scattered throughout the total area. Thus "ecological patterning" greatly benefits game populations and the "management pocketbook," for management efforts are turned toward "bolstering the weak spots" in the habitat. -- Ruth L. Hine, Wis.Cons.Dept.

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MY FIRST EIGHTY YEARS
By Hjalmar R. Holand

Twayne Publishers, Inc.
New York, N. Y.
1957 $4.00

In the last chapter of this book, entitled "How to Stay Young," the author states that "The golden secret is to find an occupation for which one has a native aptitude. Then, when this natural trend is followed diligently, one can live joyfully. (This does not mean merrily). The trouble is that this natural trend may not promise much financial profit, and because of this it is usually ignored."

Hjalmar Rued Holand, native son of Norway, arrived in the Midwest of the United States in 1884 when he was 11 years old. He soon discovered the beauties of Wisconsin and his search for a formal education was accomplished the hard way by working until he graduated with an M.A. from the University of Wisconsin in 1890. At this early date he also had the thrill of finding the unspoiled wilderness of Door County and fortunately secured ownership of a part of Eagle Cliff (now in Peninsula State Park). With an uncanny ability to make wise decisions and unusual tenacity in following these choices, he is living an interesting, fruitful life.

This is the author's 12th book and its contents in effect reflect the inspirations by which the others were written. To a large extent these are historical pilgrimages among our Norwegian pioneers, through the fields and villages of Door County and to Minnesota where he discovered the Kensington Stone and uncovered mooring stones used by Norwegian explorers as early as 1362. His searches for information on these things and for his recent book, "Explorations in America Before Columbus," took him to the scholars of several countries and through the libraries of Europe.

Ephraim can be proud of this author who lives at "Big Maples" for the King of Norway recently awarded him the St. Olav Medal for this "First Eighty Years." Persons wishing autographed copies are invited to purchase directly from the author. --- W.E.S.

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EDITOR'S NOTE: Due to space limitations, the following book reviews have been deferred until next issue: The Story of Medicine in Wisconsin (Harris), Wonderland (Scott), Kenosha--From Pioneer Village to Modern City (Cropley), The Menomini Powwow (Slotkin), John Milton: Complete Poems and Major Prose (Hughes), The Lower Fox - A River of Paper (Ainsworth), and Arts in Society (Jan.'58).

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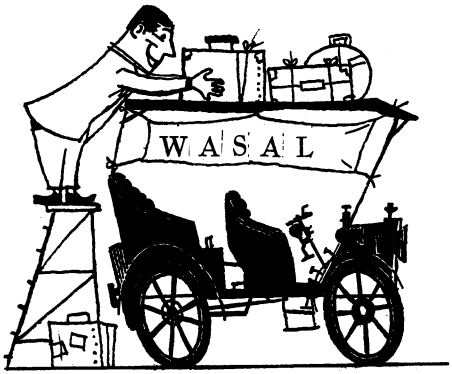


start early for.....

WHITEWATER

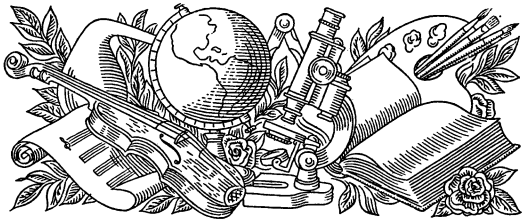
The Wisconsin Academy's 88th Annual Meeting will be held jointly with the Junior Academy of Science at Wisconsin State College-Whitewater on Saturday, May 3, followed by a guided bus tour of the Southern Kettle Moraine Area on Sunday, May 4. The Kettle Moraine also will be featured in a Senior Academy Symposium on Saturday afternoon with the following invitational speakers:

Geology - ERNEST F. BEAN, former State Geologist
Archeology - WARREN L. WITTRY, Curator of Anthropology, State Historical Society
Architecture (Pre-Civil War) - JOHN F. KIENITZ, U.W. Art History Department
Geography - BENJAMIN F. RICHASON, Dept. of Geography, Carroll College
Botany - PETER J. SALAMUN, Dept. of Botany, UW-Milwaukee
Recreation - RAYMOND T. ZILLMER, Milwaukee
Tour Leader - WARREN C. FISCHER, Dept. of Geography, Wisconsin State College, Whitewater
State forest history - CLYDE SMITH, Forest Supervisor

HUGO W. ROHDE of Oconomowoc, who has been an Academy member longer than any other living person (60 years), will be honored guest at the annual banquet planned for that evening at Whitewater Country club. With WALTER E. SCOTT as Toastmaster, the banquet will include the President's address by Father RAYMOND H. REIS, S.J., on "A Study in Human Genetics" and a talk on "Science and Magic" by Prof. JOSEPH J. CHOPP, of Wisconsin State College-Whitewater, who is a professional magician. An art exhibit arranged under the supervision of Miss KATHERINE CROSSMAN will feature paintings of the Kettle Moraine area by Wisconsin artists and pottery made from local glacial clays.

Because the formal meetings will be held in a single day (registration begins at 8:30 a.m.), both Junior and Senior Academy sessions will be carried on simultaneously,with a joint luncheon. It is expected the Senior Academy will have two separate paper sessions on miscellaneous subjects beginning at 9:15 a.m., with a business meeting in late afternoon. Box lunches will be provided for those going on the Sunday bus tour from 9:00 a.m. to 3 p.m., for a total fee of $1.75 each.

It is essential that advance reservations be made for the luncheon, banquet and field trip and members are urged to make advance plans so they can cooperate with the local committee of arrangements, which will soon send out reservation forms. Past President KATHERINE G. NELSON is Chairman of the Program Committee and Prof. HENRY MEYER is in charge of local arrangements.



STATE AND ACADEMY NEWS

WISCONSIN ACADEMY COUNCIL MEETING

By Francis D. Hole
Secretary-Treasurer

After a good lunch, President REIS called the meeting to order at 1:15 p.m. on January 25, 1958 at the University Club in Madison. The following items of business were transacted:

1. The Secretary read the minutes of the autumn meeting, which were approved as read.
2. The Secretary-Treasurer gave a financial report.
   a. Mr. DARLING moved and Mr. KOWALKE seconded a motion that the Secretary-Treasurer be empowered to invest endowment funds now in the savings and checking accounts at First National Bank in Madison either in Government Bonds, if that is again possible (as was not the case last autumn) or in the Faculty Credit Union or other insured depository, where interest is favorable. Motion was passed.
   b. The following gifts were accepted:

General Fund:	Francis Zirrer	$ 2.00
	Duncan J. Stewart, Barber-Colman Company	20.00
	Walter A. Henze	3.00
	Dana K. Akers	10.00
	R. W. Stubbe	1.00
	Irwin H. Wiseman	0.15
Endowment Fund:	R. N. Buckstaff	$ 75.00
	Mr. E.J.B. Schubring (Life member)	100.00
	Dr. Selma Schubring (Life member)	100.00
	Walter J. Kohler (Life member)	100.00
Junior Acad.:	C. M. Goethe	$ 20.00
	Wausau Iron Works	25.00
	Marathon Corp., Menasha	50.00
	Murco Foundation, Wausau	25.00
	Ed Drott, Jr., Schofield	25.00
	Wausau Paper Mills Co.	25.00
	N. S. Stone, Mosinee	25.00
	Koerper Engr. Associates	25.00

3. Mr. SCOTT moved and Mrs. NELSON seconded and the Council passed a motion that the following applicants for membership in the Academy be accepted:
   a. Those whose names are listed in the Winter, 1958 Academy Review, with the following corrections:
      DIMITRI PRONIN (spelling correction)
      WALTER A. HENZE, Sustaining Member, not private library member

b. The following additional persons:

EDITH BANGHAM, Madison	MALCOLM E. ERSKINE, Racine
GEORGE H. BECKER, Kenosha	Fr. B. J. LUYET, Madison
LOUIS G. BRECHLER, Madison	WALTER NICEWANDER, Eagle R.
RALPH J. ELKINGTON, Rhinelander	WIS. CONS. LEAGUE, Green Lake

4. The Council asked the Secretary to convey sincere thanks to Professor HAROLD A. GODER and to President C. O. NEWLUN and other cooperators at the Wisconsin State College at Platteville, for their splendid work in sending out 3,300 letters with endorsed application forms, which account for most of our recent new membership applications.

5. Mrs. NELSON and Mr. MEYER reported for the Program Committee for the May 3-4, 1958 annual meetings at Wisconsin State College at Whitewater. Details of the programs were discussed.

6. Prof. JOHN W. THOMSON, chairman of the Junior Academy, reported on activities and plans of the Junior Academy and the Academy Conference held during the AAAS meetings at Indianapolis, Ind. at which we were represented by both Messrs. THOMSON and PERRY.

7. WALTER E. SCOTT reported on the state of our Library and on the plans for forthcoming issues of the Academy Review.

8. President REIS appointed the following nominating committee, to report at the next Council meeting: FRANCIS D. HOLE, Chm., STEPHEN F. DARLING, W. C. McKERN, and R. A. McCANSE.

9. Mr. McCANSE gave an optimistic report on ways of encouraging Arts and Letters phases of the Academy.
10. Mr. LARSEN reported that the new volume of the TRANSACTIONS, with 314 pages, will shortly be off the press.
11. Mr. FLUKE reported on sales of reprints.
12. President REIS appointed Messrs. SCHUETTE and NOLAND to audit the books early in April.

13. Mr. SCOTT moved and Mrs. NELSON seconded the motion that all Academy members whose membership has endured 40 years or more are entitled to Life Membership in the form of an honor (without charge). The motion was passed. New Life Members are - F. T. THWAITES, H. A. SCHUETTE, GEORGE S. BRYAN, G. W. KEITT, JOHN C. WALKER and H. F. WILSON.

14. Mr. SCOTT presented a review of the history of the finances of the Academy. The Legislature gave the first appropriation to the Academy in 1909. Special appropriations for printing were usual at that time. In 1919, $2,000 were appropriated to the Academy. From 1932-39, no appropriations were received. In 1939, $950; in 1943-44, $100 annually; in 1951, $5,000; in 1953 to 1958, $1,500 on an annual basis were appropriated by Legislature. All told, $39,550 have been appropriated by the Legislature to the Academy. In 1953, the exchange volumes in the Academy Library were valued at $250,000. When all deductions have been made from this for contributions from the Legislature in one form or another, $160,000 still remain as clear contributions from the Academy to the library, which is housed in the University Library.
15. A discussion concerning the future of the Secretary-Treasurership was pursued briefly.
16. The Council meeting adjourned at 4:30 p.m., after a session characterized by good fellowship and an optimistic outlook.

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NEW MEMBERS

Applications for membership since the Council Meeting are from:

Sustaining: FENTON KELSEY, Jr., Madison
Family: Mr. and Mrs. HANS O. ANDERSEN, Whitewater
Dr. and Mrs. ELSTON L. BELKNAP, Jr., Madison
Mr. and Mrs. HARRY HAMILTON, Madison

Active:
DOROTHY DEE BAILEY, Superior
Mrs. IVY N. BALSOM, Milwaukee
JOHN W. BAXTER, Milwaukee
HARRY C. COPPEL, Madison
WALTER J.HARRIS, El Paso, Tex.
LINDSAY HOBEN, Milwaukee
Mrs. ARNOLD P. JONES, Milwaukee
ROBERT A. RALSTON, Wausau
E. J. SAWBRIDGE, Platteville
ROGER E. SCHWENN, Madison
ROY W. SIMONSON, Beltsville,Md.
EDW.J. SMITH,Jr., Kenmore,S.D.
Mrs. RUTH C. SMITH, Milwaukee
E. C. STAKMAN, St. Paul, Minn.
ROBERT M. STERN, Milwaukee
CARLOS H. STITGEN, Madison
VIOLA WENDT, Waukesha

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NEWS NOTES FROM CARROLL COLLEGE

(Collected by Prof. ROY J. CHRISTOPH, Review Reporter)

MILTON WEBER, member of the college music department and director of the Waukesha Symphony, is teaching an evening course at Marquette University, "The Viennese Classics and the Rise of the Orchestra." ... English department chairman JOHN FLITCROFT, member of the faculty since 1928, will retire on June 30 this year. ... President ROBERT D. STEELE has been elected for a three-year term to the Commission on Academic Freedom and Tenure of the Assn. of American Colleges. ... On sabbatical leave for the second semester, sociologist TOM STINE is touring the world by plane, accompanied by his wife. His courses are being directed by IRWIN RINDER of the UW-M and FAY FLOOD, Carroll alumna and social worker. ... The ten-day spring concert tour of the Carroll choir under the direction of LEWIS E. WHIKEHART included Detroit, Pittsburgh, Toledo and New York. ... The 30th anniversary of the founding of Mu chapter of Beta Beta Beta, national honorary biological fraternity, will be celebrated in the commons-union on April 12, 1958. More than 260 alumni are members of the Carroll chapter, organized in 1928. ... BENJAMIN F. RICHASON, head of the geography department, is a recipient of a National Science Foundation fellowship. During the next academic year he will be on leave to study, "The Nature and Results of Artificial Drainage in the Area of Wisconsin Drift." ... The 10th anniversary of the Waukesha Symphony will be celebrated April 22 with a concert in the auditorium of the newly-opened South Campus of Waukesha high school.

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NEWS ABOUT THE UNIVERSITY OF WISCONSIN

(Collected with assistance of JACK NEWMAN,UW News Serv.)

The new $200,000 observatory near Pine Bluff is to be dedicated in June during meetings of the American Astronomical Society on the campus. Installation of the 36-inch reflecting telescope in late February completed the project, financed largely by the Wisconsin Alumni Research Foundation. ... Gov. VERNON THOMSON, Pres. E. B. FRED and Pres.-Designate CONRAD A. ELVEHJEM and L. J. STILES were among speakers at the first statewide citizens conference on educational research on March 10. ... World genetics experts will gather on the campus for a "Symposium on Genetics in Medical Research," April 7-10. Experts from England, Scotland, Sweden, France, Italy, Japan, Canada and Australia will attend. ... Two of the nation's top-ranking

theoretical physicists--Prof. C. N. YANG of the Institute for Advanced Study, Princeton, N.J., a 1957 Nobel prize winner, and Prof. JULIAN SCHWINGER of Harvard--will spend this summer as members of the UW physics staff. ... Second semester enrollment totals 21,225, an increase of 352 over a year ago. The Madison campus has 15,494; Milwaukee, 4,431; and the eight Extension Centers, 1,300. ... A survey shows that women received nearly 11% of the 365 Ph.D. degrees awarded in 1956-57. ... Pres. E. B. FRED has made a strong plea for a University Art Gallery in presenting to the Board of Regents a painting, "Metaphysical Interior with Biscuits" by GIORGIO De CHIRICO, donated by NATHAN CUMMINGS of Chicago. ... The Law School has received a Ford Foundation grant of up to $175,000 to finance legal research in the public policy area. ... The National Science Foundation has announced a $3-million grant to the Association of Universities for Research in Astronomy (AURA) for a national observatory in Arizona or California. Wisconsin is a member of AURA.

E. H. FISHER (Entomology) is the editor of Entoma, official pesticide directory published by the Entomological Society of America. ... KENNETH B. RAPER recently completed a Haight Traveling Fellowship during which he spent his six-month research tour at Cambridge, Paris and the Holland laboratory of JOHANNA WESTERDIJK. ... REID A. BRYSON and JAMES A. LARSEN (TRANSACTIONS Editor) have been given a research grant for Arctic studies this summer by the Office of Naval Research in a survey to correlate data on lake ice with other biological factors. ... ROBERT E.GARD, Wis. Idea Theater Director, recently has been appointed a field editor for the New York book publishers, Duell, Sloan and Pearce. ... Six faculty members named by Dean LINDLEY J. STILES (School of Education) to design an honors program for gifted students preparing for teaching are Academy members MERLE CURTI, FARRINGTON DANIELS, JOHN GUY FOWLKES, FREDERICK M. LOGAN, JOHN W. THOMSON and HELEN C. WHITE.

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NEWS ABOUT MARQUETTE UNIVERSITY

(Collected w/ assistance of Prof.SCOTT L.KITTSLEY,Review Reporter)

REZNEAT DARNELL (Zoology) will direct an institute for high school biology teachers under a National Science Foundation grant this summer. ... The third Adult Education Division television course, "Biology and You," will be taught by EUGENE McDONOUGH. ... Fr. ADRIAN J. KOCHANSKI, S.J., Dean of Liberal Arts, represented Marquette at the annual convention of the Assn. of American Colleges. ... At the recent meeting of the AAAS, JAMES C. PERRY presented a paper and was one of the Academy's representatives, while SCOTT L. KITTSLEY represented the Sigma Xi Club of Milwaukee at their meeting held in conjunction with AAAS. ... Fr. L. W. FRIEDRICH, S.J., Director of the Physics Dept., has announced a course next semester on "Radiological Defense Procedures" in cooperation with the Milwaukee Civil Defense Administration. ... Professor DONALD GREIFF has received a $45,000 grant from the Atomic Energy Commission to study the effects of radiation on certain virus and rickettsial diseases. ... Fr. L. J. HEIDER, S.J., has been elected to membership in the Princeton Institute of Advanced Studies where he will continue his research in mathematics. ... Campus quarters for Milwaukee's proposed German-American cultural center, "Goethe House," have been offered. ... Fr. BASIL J. LUYET (Madison), head of the Biophysics Dept. of the Am. Foundation for Biological Research, gave the recent Phi Sigma lecture on"Water, Ice and Molecular Biology."... Yale Professor of physics and natural philosophy, HENRY MARGENAU, presented the 24th annual Aristotelian Society lecture on the subject, "Thomas and the Physics of 1958: a Confrontation." ---

NEWS ABOUT THE STATE COLLEGES

There are almost twice as many men as women at the Wisconsin State Colleges this semester--7,577 to 4,118. At Platteville, Stevens Point and Superior there are more than two to one and River Falls has a ratio of three to one--but at the Platteville Institute of Technology it's 299 to 1! ... According to State College Director EUGENE R. McPHEE, enrollment has doubled in the past six years with an increase from 5,750 in 1952 to 11,600 in 1958 while in this period teachers increased from 560 to 800. When the State Colleges celebrate their 100th Anniversary in 1966 they expect to have an enrollment of about 20,000. ... This summer more than 6,000 Wisconsin teachers will go back to school in June at the nine Wisconsin State College summer sessions. ... A legislative grant of $200,000 is available this fall for scholarships and assistance awards to deserving high school seniors who want to continue their education at the State Colleges. Most of the money goes automatically to the 1,000 top-ranking graduates at $117.00 each. ... In 1956 the State Planning Division prepared a report on "Long-Range Development Plans for the Wisconsin State Colleges" including estimates of future student population, needed building development and ground layout plans. A re-examination of these plans for Platteville, River Falls and Whitewater now has been prepared in revised form under date of March 1, 1958.

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HONORS, AWARDS AND POSITIONS

The following honors, awards and positions of Wisconsin Academy members (not in any special order and some of them belatedly announced) are in addition to those mentioned elsewhere this issue: Hats off to Rev. ANSELM M. KEEFE of St. Norbert College (West De Pere) who last fall completed his tour of service as editor of the quarterly bulletin, "The Biologist" sponsored by the Phi Sigma Biological Society, with the 50th issue--over 12 years of dedicated and fruitful work. ... JOHN G. SURAK is the new Chairman of the Milwaukee Section, ACS. ... A. W. SCHORGER is the new President of Friends of the University of Wisconsin Library and library Director LOUIS KAPLAN is ex-officio Secretary-Treasurer. ... MERLE CURTI of the UW Dept. of History has been elected Vice-Chm. and a member of the Board of Directors, Am. Council of Learned Societies. ... Officers of the Wis. Regional Writers' Assn. after the election last fall include NEITA FRIEND (Pres.), AL NELSON (1st V.P.) and JOHN LONSDORF (Treas.)

EDGAR L. OBMA of Dodgeville won the Award of Honor for the best picture in the entire exhibit at the 62nd annual convention, Wis. Professional Photographers Assn. recently. ... In new Conservation Dept. staff appointments CYRIL KABAT is Research Coordinator; JAMES B. HALE, Chief of Game Research; and RUTH L. HINE, Editor of Research Publications. ... HELEN SMITH, Evansville, recently won the British Herdman Memorial cup and a cash honorarium for her article, "Water Magic." ... ALLEN ABRAMS, Wausau, was appointed by the Governor to head the state-wide Governor's Conference on Education Beyond High School scheduled for this Spring. ... JOHN T. EMLEN (UW) was re-elected President of the Wilson Ornithological Society. ... FRANK H. NELSON is Pres. of the Walrus Club of Milwaukee. ... RICHARD HEMP, Mosinee, is Pres. of the Wis. Federation of Conservation Clubs. ... ROBERT A. McCABE was elected Chm. of the W.C.C. Research Advisory Committee. ... FREDERIC G. CASSIDY was elected Pres. of the Am. Dialect Society. ... FARRINGTON DANIELS was elected Pres. of the National Geochemical Society. (See page 83 for continuation)

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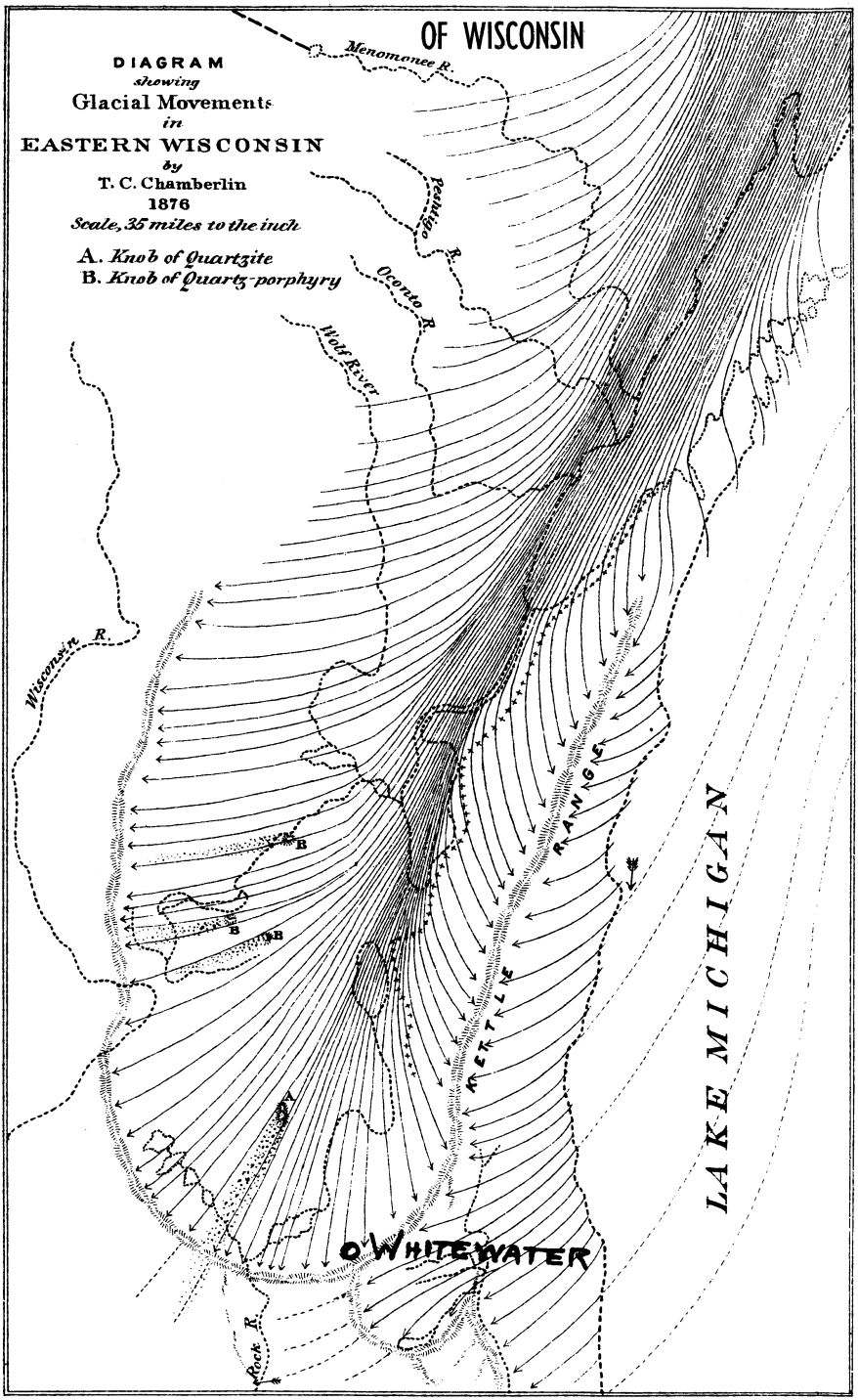
Walter E. Scott, Madison

THE KETTLE MORAINE AREA OF WISCONSIN



(See page 52 for explanatory reference)