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WISCONSIN ACADEMY REVIEW



Winter Landscape

Edward A. Boerner

PUBLISHED QUARTERLY BY THE
WISCONSIN ACADEMY OF SCIENCES, ARTS AND LETTERS
Winter, 1959

WISCONSIN ACADEMY REVIEW

Vol. 6

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WISCONSIN'S PIONEER STATE COLLEGE—PLATTEVILLE

By Harold A. Goder
Department of Biology

Continuously for 93 years Wisconsin State College at Platteville has served the people of southwestern Wisconsin and the State of Wisconsin. Being the first teachers' college founded in Wisconsin it is known as the "Pioneer College." Situated among the unglaciated hills of the Driftless Area it is in a region of the state which is unique for its natural and historical interest.

The area, resembling the rugged plateau of West Virginia, has its strongest topographic features in the unglaciated hills and the great trenches of the Mississippi and Wisconsin rivers and their numerous branches. Blue Mounds with its famous Cave of the Mounds and Military Ridge lie several miles northeast of Platteville. The ridge is the site of a military road built in 1835 connecting Green Bay with Prairie du Chien and terminating at Nelson Dewey State Park which overlooks the Mississippi river. North of Nelson Dewey Park is Wyalusing State Park above the confluence of the Mississippi and Wisconsin rivers. Both of these parks lie west of Platteville.



BJARNE R. ULLSVIK
President

Lying northeast of the city is the Platte Mound which has an elevation of 420 feet. On a south slope is the world's largest "M". The letter is outlined in whitewashed limestone rock and is the symbol of the mining students at the Wisconsin Institute of Technology in Platteville.

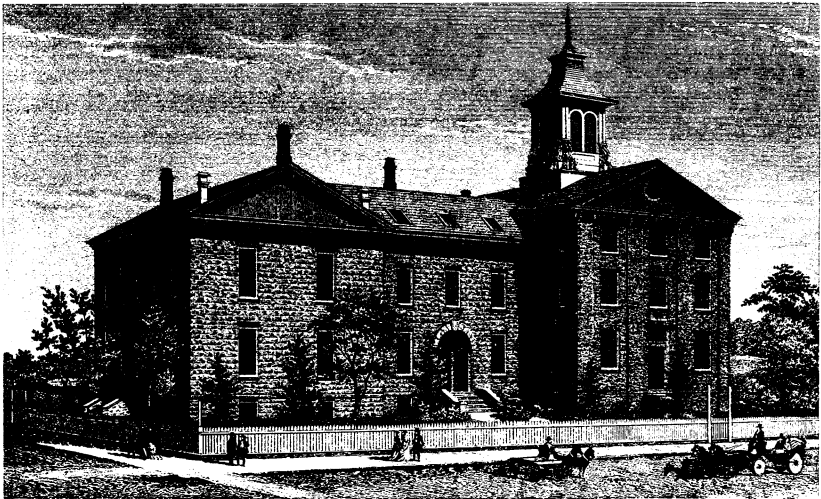
Nearly all of the caves of the state lie within the area. In early days lead and zinc mining was sometimes carried on by stripping deposits that lined the caves. The nickname "Badger" was given to the early miners because of their mode of living. A traveler in 1855 narrated, "I saw the old mining country from Mineral Point to Dubuque, where lead had been dug for many years, and where the men lived in the ground and were called Badgers. . . ."

Southwestern Wisconsin is also rich in historical sites. Prairie du Chien, an early French fur trading center, has a wealth of early homes, churches, and

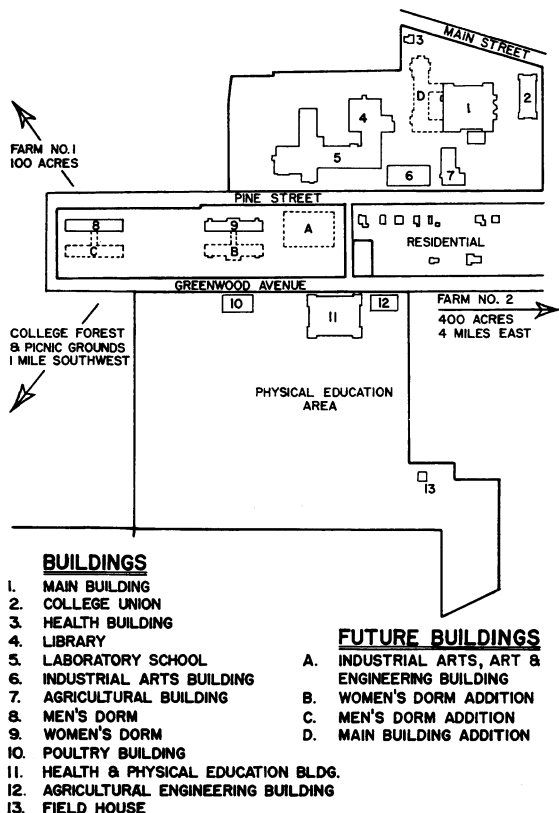
museums. In Mineral Point, 17 miles northeast of Platteville, there is a settlement of early homes of Cornish miners along Shake-Rag Street--so named because of the activity of wives shaking a white cloth to signal their husbands home from the mines for lunch.

The heritage of the past has contributed much to the colleges within the City of Platteville. Early in 1842 an institution called the Platteville Academy was incorporated by the Territorial Legislature. The Academy continued to function until 1866 when it became Platteville State Normal School. The original Academy building was abandoned in 1853 when a new building was constructed. The old Academy building is now a private residence at the corner of Cedar and Bonson streets and the new is now the central portion of the Institute of Technology. That year the September term began with five faculty members and an enrollment of 99 students, many of whom traveled by stage-coach to reach Platteville. Until 1907 the Normal School was held in the building which now houses the Institute of Technology. Cornerstones were laid that year for a new building at the corner of Main and Washington streets, one and one-half blocks west of the Institute, which was to house the Normal School and laboratory school. In 1927 Platteville State Normal became Platteville State Teachers' College and in 1951, Wisconsin State College at Platteville.

The college campus is of the past, present and future. Shortly after the completion of the main building an expanding enrollment necessitated the construction of an Agriculture-Industrial Arts building. Other buildings were soon added to this nucleus of the physical plant.



STATE NORMAL SCHOOL, PLATTEVILLE.



Older additions to the campus included a separate Industrial Arts Building and complete sets of farm buildings on two college farms. The newest additions are the Elton A. Karrmann Library and the Edgar G. Doudna Laboratory School which were completed in 1954 at a cost of \$1,300,000. Over \$200,000 has been spent modernizing the main building. Also recently completed are dormitories for men and women students and a student center.

The future timetable includes a Grant County Child Guidance clinic, health and physical education building, and a science build-

ing. A new football field and stadium are to be laid out on the site of Farm Number 1. A great impetus was given to the school's Agriculture Department with the recent acquisition of 450 acres of farmland just east of the city of Platteville. Here the college's agriculture experimental sites will be centered to better serve the local populace. The old farmland will be incorporated as part of the main campus.

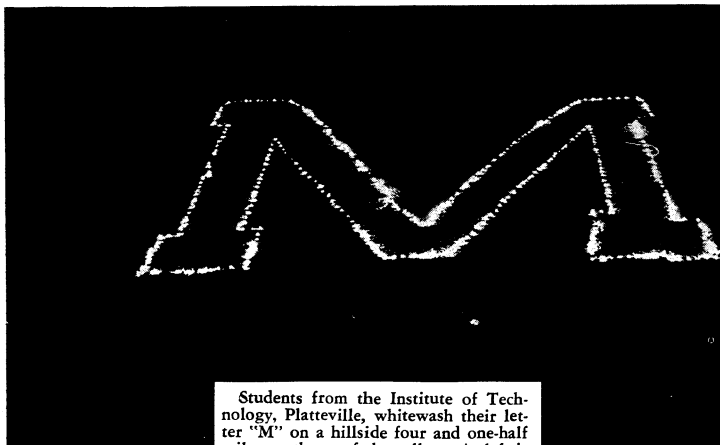
The present student body of 1,286 full-time students at this Wisconsin State College comes from 43 Wisconsin counties, eight states, and four foreign countries. It is estimated that by 1966, the centennial year, the enrollment will reach 2,400 full-time students. Since 1919 extension courses have been offered by the college. Today 301 students are enrolled in extension courses which are held both on- and off-campus. Annually nearly 200 B.A. or B.S. degrees are awarded. Students are offered majors in 11 fields, minors in eight, and pre-professional training in chemistry, commerce, dentistry, forestry, law, medicine, medical-technology, nursing, and pharmacy.

Pending Wisconsin Legislative action in 1959 the Wisconsin State College and Wisconsin Institute of Technology are to be combined into one institution--the Wisconsin State College and Institute of Technology at Platteville. All facilities on both campuses are available to students of either institution. President BJARNE R. ULLSVIK of the college will head the merged institutions and President MILTON MELCHER of the Institute of Technology will head the Technology Department. The merger has promised integrated records, grading, admissions, and the school calendars. There will be one varsity program, one annual commencement and a single student governing board. With the merging of the two institutions the program of both colleges will be enriched.

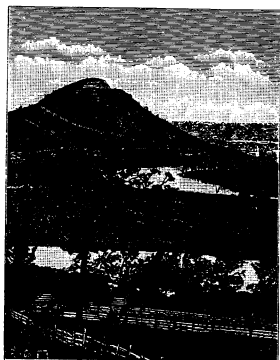
The story of the growth and the projected building program of the Wisconsin State College at Platteville was presented recently to a group of 30 "Pioneer Patrons", supporters of Wisconsin's first teachers' college from 25 southwestern Wisconsin communities. President Ullsvik appointed this committee to act in an advisory capacity to interpret the school's program and objectives to residents of Wisconsin.

As successor to CHESTER O. NEWLUN and tenth president of the college, President Ullsvik has continued to enlarge the scope of the academic program. A Master of Science degree in Education is planned and as the need arises the number of majors and minors will be increased. With future additions to the physical plant, students will have every opportunity to fulfill their educational needs.

#



Students from the Institute of Technology, Platteville, whitewash their letter "M" on a hillside four and one-half miles northeast of the college. At left is the "M" outlined with oil-soaked flares. Each year the "M" is whitewashed and lighted before the engineers' prom.



VIEW FROM THE PLATTE MOUNDS

By William R. Smith

An ocean of prairie surrounds the gazer, whose vision is not limited to less than thirty or forty miles. This great sea of verdure is interspersed with delightfully varying undulations, like the vast waves of the ocean, and every here and there sinking into the hollows, or cresting the swells, appear spots of wood, large groves, extensive ranges of timber, small groups of trees, as if planted by the hand of art, for ornamenting this naturally splendid scene. Over this extended view, in all directions, are scattered the incipient farms of the settlers, with their luxuriant crops of wheat and oats, whose yellow sheaves, already cut, form a beautiful contrast with the waving green of the Indian corn, and the smooth, dark lines of the potatoe (sic) crop. Throughout the prairie, the most gorgeous variety of flowers are seen rising above the thickly set grass; which in large and small patches has here and there been mowed for hay, all presenting a curiously chequered appearance of the table beneath us. The mineral flower, the tall, bright purple and red feather, the sun-flower, the yellow bloom, the golden rod, the several small and beautiful flowers, interspersed with the grass, render the scene indescribably beautiful. To the north, the Wisconsin hills are seen bounding the view; to the east, prairie and wood are only limited by the horizon, and the Blue Mounds, on the northeast, form a back ground and a land mark; to the south, the view over the rolling country extends into the State of Illinois; in the southwest, is seen the Sinsiniwa Mound; the view to the west is only bounded by the Table Mound, and the hills west of the Mississippi, and distant about thirty miles; while to the northwest the high hills through which the Father of Waters breaks his sweeping way, close the view. Below us, on the plain, is the little village of Belmont, with its bright, painted dwellings; the brown lines in the broad green carpet indicate the roads and tracks over the prairie; the grazing cattle are scattered over the wide surface looking like dogs, or sheep, in size; while in the distance are seen waggons (sic) of emigrants, and ox teams hauling lead, merchandize and lumber; the horseman and foot traveller are passing and re-passing; pleasure and travelling carriages are whirling rapidly over the sward, as if the country had been improved for a century past, instead of having been only five years reclaimed from the savages. This picture is not exaggerated--it fails of the original beauty, in the attempt to describe that scene which is worth a journey of a thousand miles to contemplate in the calm sunset of a summer day, as I have viewed it, from the top of the Platte Mounds.

Editor's Note: This flowery description of a midsummer view from Platte Mounds was published in 1837 in Gen. Smith's "Observations on Wisconsin Territory." Members are invited to resurvey the scene and mark changes made by 122 more years of "reclamation from the savages."

WILD MAMMAL CHASE

By Hartley H. T. Jackson
U. S. National Museum, Washington, D.C.

Your efficient Editor had the temerity to ask me to write a squib about my experiences in collecting information and material for my pending book on The Mammals of Wisconsin. When I was an editor I never possessed such bravery--I knew I was then obliged to accept the article!



Vernon Bailey (left) and H. H. T. Jackson, at Spring Pond, Big Levels Game Refuge, Virginia (by H. H. T. J., August, 1935).

Manuscript for the book is now with the University of Wisconsin Press, and publication is anticipated in the fall of 1959. The drudgery of writing is for the most part over. The drudgery of proofreading lies ahead.

The earlier parts of the study involved collecting specimens, observing mammals in the wild and in captivity, procuring photographs, studying specimens in the laboratory, searching literature files, making drawings or having them made, and always collating, verifying, and correcting, and 1001 other duties. I had a mammal, a bear perhaps, by the tail and could not let go.

Without an exception, I have enjoyed a friendly and unselfish cooperation from hundreds of individuals in all walks of life. Such cooperation made lighter the drudgery, and the project a pleasure.

The field work offered great interest, considerable physical effort, a few hardships, and much amusement. More than 100 major locations were used as "bases of operation," some of them being visited several times at different seasons of the year. Sometimes headquarters were in a swanky hotel, often in a resort, and not infrequently in our own camp. Owners and operators of hotels were always cooperative, but seldom understanding. At one hotel, where the proprietor had been especially helpful, I found it necessary to have a voucher signed with my title as "Biologist." The man looked at me from head to foot and back again, several times, then in his surprise blurted, "So you're a bile-lol-lo-gist." He was not too alarmed! He shook hands when I left and asked me to "come again"!

One never knows whether to use the term "mammal" or "animal" when inquiring about mammals. I explained my work to one businessman and asked him if any of the caves

in the region were inhabited by mammals. "No," he said, "but one of them about two miles northeast has a lot of them funny birds called bats." That was information I needed.

On July 1, 1918, our authorization and appropriation was delayed, so in order to curtail expenses two assistants and I camped in a tent in a pasture on the farm of Fred J. Bandy, between Rib Hill and Mosinee Hill, Marathon county. Cattle, mosquitoes, and rain were constant tormentors. The Bandy family liked us, took pity on us, and we three were among the guests at a sumptuous wedding feast for their recently married daughter.

It was near the Rib Hill camp, July 12, 1918, that I was attempting to photograph a half-grown female skunk and had a string tied to her foreleg to keep her quiet. Quoting from my manuscript: "One of my field assistants thought the string was not just proper, and though often warned never to do so made a quick movement with a stick to adjust the string, jabbed the skunk in the ribs, and I got the full benefit of the glandular discharge on the right side of my face and body, including some in my eye.



I photographed the skunk in this action, and afterwards petted it without further incident before I prepared it for a specimen." I burned the shirt I was wearing, but could hardly treat my face that way! For a week I tried to keep the right side of my face to the leeward of my nose. The photograph was discarded from official files as immoral and indecent. The report

did not indicate which mammal--me or the skunk!

#

CHECK YOUR CALENDAR FOR THE NEXT ANNUAL MEETING AT
WISCONSIN STATE COLLEGE, PLATTEVILLE
FEATURING THE DRIFTLESS AREA IN WISCONSIN
MAY 2-3, 1959

SOILS OF THE "DRIFTLESS AREA"

By Francis D. Hole
Dept. of Soils, Univ. of Wisconsin

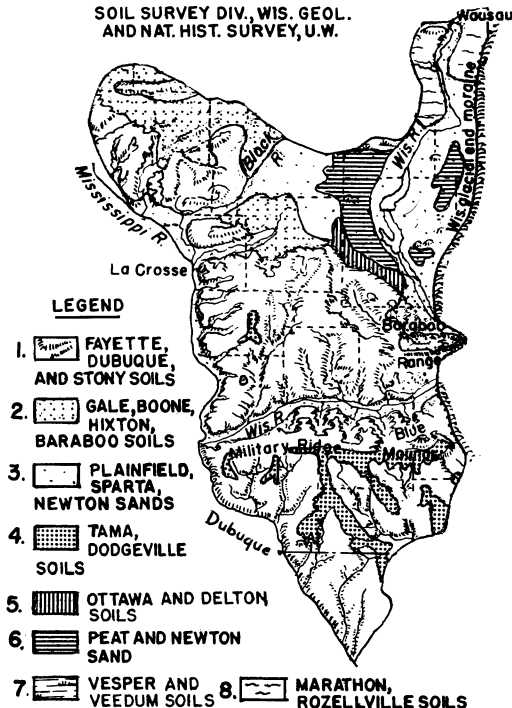
The accompanying map (see p. 9) of the soils of the Driftless Area is generalized to show just eight soil groups. Group 1 and 8 occur on rolling to hilly land, much of which would be unproductive stony country, somewhat like the Ozark Mountains of Missouri, were it not for a fine soil material blown in centuries ago. This soil is silty (flour-like) and forms a fertile blanket over bedrock from Dubuque to Blue Mounds and Baraboo, and northwest along the Mississippi river valley; and also in the vicinity of Wausau. The north edge of the bedrock bluff or escarpment, which extends between La Crosse and the Baraboo Range, overlooks the vast plain of central Wisconsin, with its dry sands (Groups 3 and 5), its extensive peat bogs (Group 6), and at the far north, the wet Vesper-Veedum soils (Group 7).

Of the eight soil groups shown on the map, one is characterized by peat (no. 6), two are sandy (nos. 3 & 5) and the other five are silty. The silt (called loess) drifted deeper than 20 feet near the Mississippi river, but only about two feet deep near Wausau in the north. Where the wind-blown silt covered limestone bedrock, soil groups 1 and 4 formed. The light-colored soils of group 1 formed under forest cover and the dark soils of group 4 formed under prairie vegetation. Where the silt drifted as thick as three feet or more, the Fayette and Tama soils developed. Where the soil is thinner than three feet over stony red clay on limestone, the Dubuque and Dodgeville soils occur. In areas with sandstone bedrock, two feet of silt over the sandstone yielded with time a forest soil called the Gale silt loam of group 2. Where soft sandstone and siltstone bedrock comes to the surface, Hixton loams formed. Coarse sandstone gave rise to Boone sands, also of group 2.

In the Baraboo Range, and on Rib Mountain near Wausau, shallow silty soils overlie quartzite bedrock. At the north central edge of the Driftless Area, a small strip of Vesper-Veedum soils (group 7) occurs. These soils are imperfectly drained and formed from about 20 inches of wind-blown silt over soft sandstone and some shale. On the slopes of the Wisconsin river valley south of Wausau, about 20 inches of silt overlie weathered bedrock granite and schist, giving rise to the Marathon and Rozellville soils. The two sandy soil groups are numbers 3 and 5. Group 3 includes light brown Plainfield sands and nearly black Sparta prairie sands, both deep and droughty. They

SOILS OF THE "DRIFTLESS AREA"

GENERALIZED MAP BY ED. HOLE, 1958,
SOIL SURVEY DIV. WIS. GEOL.
AND NAT. HIST. SURVEY, U.W.



occur in the central sandy plain and also in the valleys of the Mississippi and Wisconsin rivers and their tributaries.

Group 5 includes sands two to four feet deep overlying red clays, both limey (Ottawa sands) and non-limey (Delton). The remaining group, number 6, includes wet black sands called Newton, associated with bodies of peat.

The great variety of soils in the Driftless Area constitute a valuable inheritance, of which we are trustees. Soil erosion by wind and water can be checked with wise land use practices.

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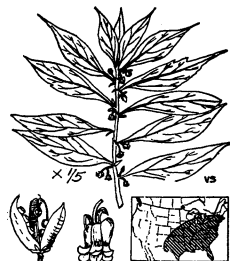
From 1959-61 Budget Statement of WISCONSIN FREE LIBRARY COMMISSION

"There are still, in 1958, over 600,000 Wisconsin people who have no legal access to a free public library, and until these people have their reading needs fully met in their own communities, the Traveling Library (general reference and loan services) will continue to serve them. This means the book collection of the Traveling Library must be geared not only to the needs of the reader without a library, but to the needs of all local libraries in their process of development." -- S. Janice Kee, Secretary

THE GREEN VIOLET IN WISCONSIN

By Margaret S. Bergseng
Calif. Dept. of Agriculture, Sacramento

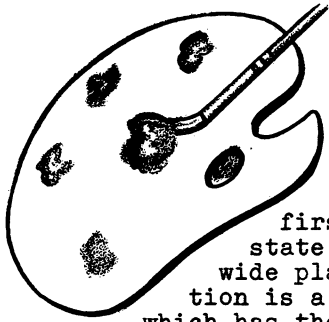
Few people in Wisconsin are aware of the presence of the green violet, Hybanthus concolor (T. F. Forst.) Spreng., near Platteville, Grant county, in the Driftless Area. Careful scanning of the interesting outline for last fall's Field Trip to Southwestern Wisconsin by Prof. HUGH ILTIS fails to reveal any mention of this plant, one of Wisconsin's rarest, discovered by the author in association with twinleaf (Jeffersonia diphylla (L.) Pers.) in 1940.



The colony of green violets and twinleaf is about 20 feet wide by 125 feet long. It is on a steep wooded slope, the bank of a small stream. These plants, both with spreading, fibrous roots, grow in deep, black, calcareous soil, derived in thousands of years from the limestone, a sedimentary rock, now exposed by long erosion of rushing water. There are marvellous fossils to be found in those rock layers, telling of the life on earth in days of long ago. The green violet now grows above the trilobites, the coiled and straight cephalopods, the crinoids, snails, corals, sponges and brachiopods, as well as many other life forms whose impressions have been preserved in the limestone layers for us study and to wonder about.

Common as is the green violet throughout the southern states in unglaciated, rough terrain, the small colony at Platteville is an isolated one on the northern edge of its range. The nearest collections of this plant have been made in Peoria, Illinois and in Madison, Indiana, with one old record near Chicago. The occurrence of the green violet in association with twinleaf, another southern plant extremely rare in Wisconsin, leads us to speculate like the late Professor Fassett and his successor, Professor Iltis, as to how long these southern species have been living in that region. No doubt at some period in its history, before the ice had by-passed the Driftless Area, these plants were more abundant on the slopes south and southwest of Wisconsin. When Gray's New Manual of Botany states that the green violet grows "north to Michigan and Wisconsin," it is referring to that one small colony in Grant county. If, and when, that lone colony is despoiled by thoughtless, careless men, the northern limit of the green violet will move south a few hundred miles. If its habitat is destroyed by cutting trees and planting grass, the last hairy stem with its slender, pointed leaves with small green violets in their axils will vanish.

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WISCONSIN ARTS FOUNDATION AND COUNCIL

By Robert E. Gard

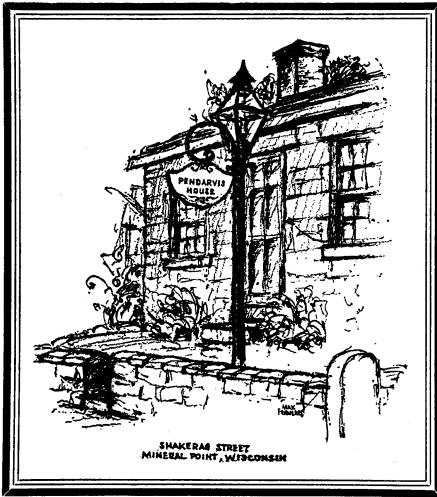
Director, Wisconsin Idea Theater

The Wisconsin Arts Foundation and Council is a new idea. It is the first real attempt in the history of the state to integrate all the arts in a state-wide plan for mutual benefit. The organization is a legally incorporated non-profit group which has the aims of aiding worthy creative ideas and individuals, of providing stimulus and outlet for both amateur and professional artists, and of helping to create a public awareness of the arts. It hopes to provide a clearing house for information about the arts in the state, and to perform as a link among the many arts organizations.

The plan, which grew out of an ever increasing knowledge that a spiritual side of man's life must not be ignored in a period of overwhelming emphasis on science and technology, was originated in 1957 by a small group of planners meeting at the University of Wisconsin. For over half a century the University, through its Extension Division, has demonstrated a major interest in the community arts. It was fitting, therefore, that the idea for the Foundation and Council stemmed from the University which occupies the leading position, nationally, among great universities concerned with the problem of the arts in contemporary life.

The Board of Directors of the Foundation and Council and the many members, organizational and sustaining, who belong to it, are aware of the rich patterns of culture in Wisconsin. The cultural map of the state as it now exists includes: the heritage of the many nationality groups; the Rural Artists Association (outgrowth of the devoted work of John Stuart Curry, Aaron Bohrod and Jim Schwalbach); the powerful Wisconsin Regional Writers Association; the Wisconsin Idea Theatre Conference; the many, many community choruses and other musical organizations; the municipal symphony orchestras (illustrated by Madison and Waukesha); the remembered glory of the great German Theatre in Milwaukee; the summer festivals (such as the Peninsula Music Festival) and the fame of Frank Lloyd Wright. . . .

If Wisconsin is outstanding for her varied art interests, she may become even more outstanding through far-seeing programs integrating and aiding the impulses and organizations that make art live. Further information on the Foundation and Council may be had from the Secretary, ROBERT SCHACHT, Bureau of Information & Program Services, University Extension Division, Madison 6, Wisconsin. # #



PENDARVIS—THE CORNISH RESTORATION

By Robert M. Neal
Mineral Point

In the 1830's, when the tin miners from Cornwall, England started migrating to the lead ore region in southwestern Wisconsin, they had within themselves the cherished hope of a better life. Packed within their wooden trunks were choice and sentimental little objects that would give comfort and pleasure to them in new homes in a

new land. Figurines of animals and people, blue dishes, pewter plates and various other ornaments, along with the well-used family Bible, were about the only items that could be transported overland in the crude oxen or horse wagons, once the journey by water had ended.

While the country was strange to them, they soon realized that the abundance of native stone offered the opportunity to re-create, within limits, the same style of homes they had left in Cornwall. Using the native Galena limestone, they built one- and two-story cottages in a ravine along a winding stream and nearby a spring, nestling them against and into the hillsides for protection. Their choice of location was wise, for the original mines in which the men worked were on the opposite hill, and within easy distance of their homes. At mealtime, in particular, the womenfolk could stand outside their front door and, by shaking a light colored cloth, signal to the men that the simple meal was ready.

This little settlement area was soon known as "Shake-rag-under-the-Hill." As the settlement grew and spread to the south and west it became known as Mineral Point, from an outcropping of mineral on a point of land that projected into another intersecting ravine. These Cornish settlers were bound together by ties of family and nationality. Traditions and customs were preserved in their homes, the most outstanding of these being their foods.

An adjoining group of these little cottages, on Shake rag street in Mineral Point, has been restored and preserved as a unit, a project unique in the annals of

Wisconsin history. Named Pendarvis, after a small village in Cornwall, they represent the first effort in the state to perpetuate the architecture, food traditions, types of interior furnishings and general historical customs of an ethnic group that was so important and vital to the early economic, social and political growth of the territory.

In one of these cottages some of the traditional foods--pasty, saffron cake, plum preserves and scalded cream, to name but a few--are offered on sufficient advance notice. Other food items are also served without reservation if seating space is available.

In the quiet atmosphere of the cottages with their adjoining courtyards and gardens, one may experience the intimate repose that comes from a touch with the past.

(Editor's Note: Mr. Neal may be addressed at Pendarvis House, Mineral Point, Wisconsin)



REPORT OF COMMITTEE ON WATER POLLUTION

In 1958, 102 orders of the committee were satisfied, an increase of 10 over the previous year. For the period 1948-58, a total of 1,136 orders was issued, of which 614 have been satisfied. There are now 108 projects under construction, 39 have plans approved, and 63 have engineers preparing plans for improvements. Over the years, a total of 87 cases has been referred to the Attorney General. Of these, 39 have been completed, 13 are under construction, four have plans approved, and nine have engineers retained. Completion of the remaining 22 will depend on solution of legal and financial problems. Industrial waste treatment projects completed in 1958 totaled 65, five industries providing treatment facilities upon recommendation, thus eliminating necessity for issuance of orders. Twenty-eight municipalities completed treatment plants or improvements in 1958 as compared to 12 in 1957. Of the 63 communities with sewers which provided no treatment in 1949, 17 still need to provide facilities. Nine of these have plants under construction and five have plans approved.

---Theodore F. Wisniewski, Director of Committee

ORIGIN AND DEVELOPMENT OF THE VEGETATION OF SOUTHWESTERN WISCONSIN*

By J. T. Curtis

Dept. of Botany, Univ. of Wisconsin

The presettlement vegetation of southwestern Wisconsin was composed of hardwood forests, savannas, and prairies, with minor amounts of conifer forest and conifer swamp. Of these, the savanna covered the greatest portion of the area, followed by the hardwood forest and then the prairie. All are still present today, but in greatly reduced amounts. Much of the area formerly present as savanna has changed to closed forest in the past 100 years, while much of the original oak forest has changed to maple forest. The true prairies have remained unchanged wherever they have escaped the inroads of agriculture.

These recent changes are not unusual, since similar modifications have been taking place for thousands of years. The ultimate origin of the vegetation of the area is very poorly understood. The evidence currently available indicates that a mixture of types very similar to that now present grew in the region all during the Pleistocene. As each of the major ice sheets approached the region from one direction or the other, there was an increase in the conifer forest community, especially of the type dominated by spruce and fir. During interglacial periods, these conifer forests gave way to hardwood forests and often to prairie, only to return to hardwoods and then conifers with the approach of the next sheet.

The shifts in the major communities in post-Cary time have been well documented for southwestern Wisconsin by studies of fossil pollen obtained within the region. Estimates of the timing of the changes can be made from Carbon-14 dates gathered in surrounding areas. It would appear that conifer forests were important on the uplands from at least 10,000 or 12,000 B.C. to about 6,000 or 7,000 B.C. The shift to hardwood forest at the latter date lasted until about 2500 or 3000 B.C., at which time there was a major expansion of the prairie and savannas.

DECIDUOUS HARDWOODS

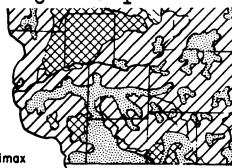
Maple Climax

Pine Subclimax

Oak Subclimax

GRASSLAND

Tall Grass Prairie Predclimax



© J. T. CURTIS

This phase lasted until about 500 B.C. Since then there has been a tendency to return to hardwood forest, but Indian fires induced a frequent alternation between forest and savanna. Only the most pro-

* - Summary of remarks presented as a "slide talk" at Wis. Chapter, Soil Cons. Soc. of America meeting at Platteville, November 7, 1958.

tected sites were able to develop to a mesic forest of sugar maple and basswood. Prairies persisted mainly on well drained hillsides with a southwest exposure, while relics of the pine forests were largely restricted to steep, north-facing cliffs of sandstone.

The significance of these vegetational changes to soil science lies in the field of soil genesis. Scarcely any important soil in the region today can be said to have developed from parent material under the influence of an existing cover. Instead, all the major types must have originated from pre-existing soils. The important changes on the uplands were from podzols to gray-brown podzolic to prairie soils, with several cycles of degradation from prairie to forest soil and back again occurring over much of the area in the past 4000 years. This picture of change is further complicated by the possibility of extensive removal of exposed upland soils by wind erosion during periods of dessication at the time of maximum prairie extension. According to this view, the soils of the region should be classified and described in terms of their own characteristics, without regard for any potentially misleading interpretations of the vegetational interactions responsible for their origin.

#



**start early
for....**

PLATTEVILLE

CALL FOR PAPERS

The 89th annual meeting of the Wisconsin Academy will be held on Saturday and Sunday, May 2-3, 1959 at Wisconsin State College-Platteville. The general program and Sunday field tour will feature the "Driftless Area in Wisconsin" but members having papers to offer in their special fields also are invited to present them at one of the several paper sessions. If you wish to appear with either a presentation on the general program or a special paper, please promptly write to

Professor HENRY MEYER, Program Chairman and President-Elect, Biology Dept., Wisconsin State College, Whitewater. Co-chairmen of the Local Committee on Arrangements for this year's meeting are Professors ELLA M. MARTIN and HAROLD GODER of Wisconsin State College-Platteville.

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THE WISCONSIN IDEA — IN BROADCASTING

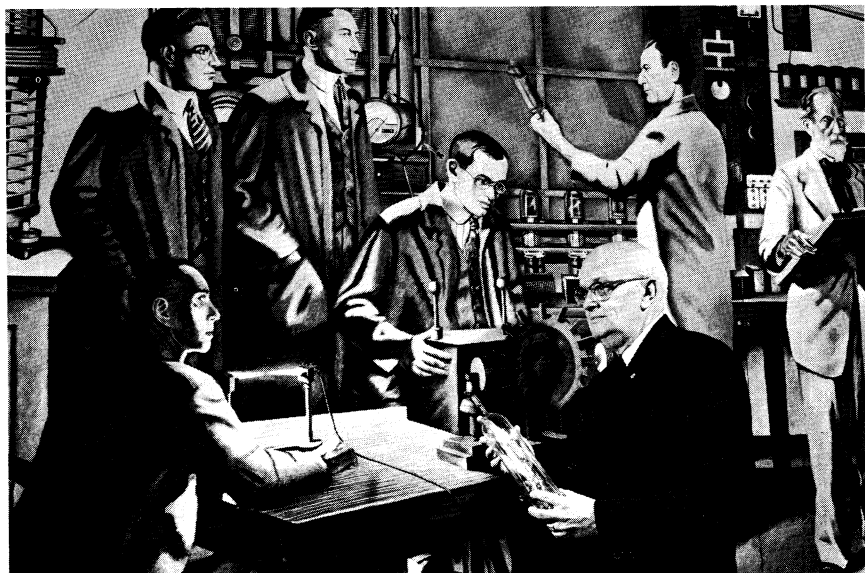
By Harold A. Engel

UW Division of Radio-Television Education

"Wisconsin has a right to be proud of its pioneer work in all phases of broadcasting, including its pioneering in program building as well as the scientific development of the art."

So spoke C. M. JANSKY, Jr., at the ceremony dedicating an historical marker commemorating the establishment of 9XM-WHA, "the oldest station in the nation" at the University of Wisconsin. Mr. Jansky, as a student at the University, participated in the early wireless experimentation and is now an internationally famous radio electronics engineer in Washington, D. C. For more than 40 years he has been actively associated with broadcasting. He speaks with authority from personal knowledge.

When Mr. Jansky was asked about the facts in the WHA "oldest station" claim, he remarked, "Not only do I think this is correct in respect to WHA; but since it is well recognized that regular broadcasting started in the United States, WHA may also be credited with being the oldest broadcasting station in the world."



C. M. JANSKY, Jr., of Washington, D. C., holding one of the original tubes which he designed and made for station 9XM in 1917. The tube is now displayed at Radio Hall.

To the inspiring leadership of a great teacher, the late Professor EARLE M. TERRY of the Physics Department, Mr. Jansky gave the credit for laying Wisconsin's radio groundwork. "Except for him," said Jansky, "there would have been no early experimentations in radio telephony at the University. Except for him WHA could not be called the nation's oldest broadcast station. Except for him there might well be no WHA at all."

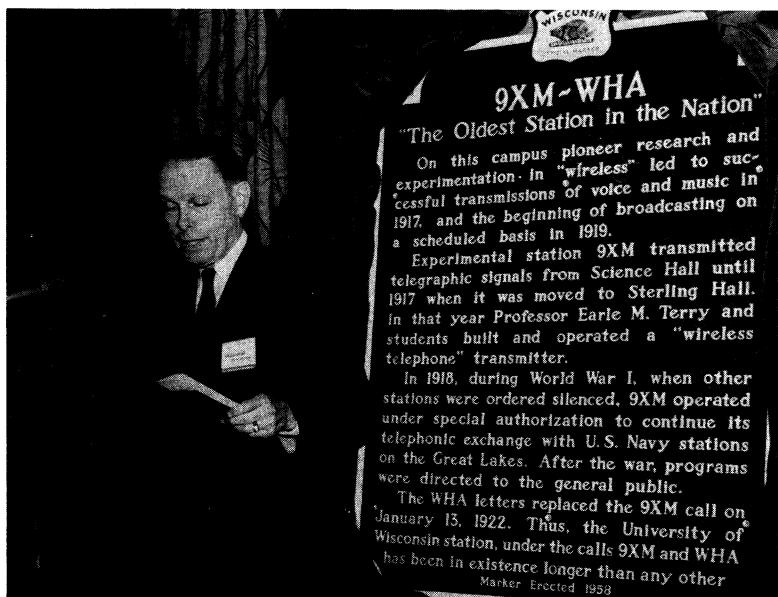
Professor Terry, the scientist, was a man of social vision. He sensed some of the potentialities of "the wireless telephone" as an instrument of education, and stimulated the interest of individuals in other departments in providing programs. When pleading with somewhat apathetic colleagues for support for the broadcasting activity he ventured the prediction that the day would come when "wireless receivers will be as common as bathtubs in Wisconsin homes."

Through the perseverance of the professor and his students, experimental station 9XM in 1917 was able to put into the air "successful" transmission of voice and music. The transmitter, including the vacuum tubes it used, was built by hand in the laboratory. One by one, vexing problems were solved. During World War I, as a participant in two-way wireless communication with the U. S. Navy, 9XM moved forward when other stations were silenced by government order. By 1919 a regular schedule of broadcasting was maintained.

Following the War, in the early '20's, broadcasting caught the fancy of the American public. It was predicted that it would become a universal source of educational opportunity. Many colleges and universities set up their own stations.

In the early days the acquiring of a wireless receiving set was a do-it-yourself matter. Component parts were selected from counter stock in radio shops, and following a hook-up diagram, the receiver was assembled. Then, sensing the demand, electronic companies sold "ready-made" receivers. To stimulate receiver sales some of these companies set up transmitting stations to provide programs for the receivers they sold.

Then came the discovery. The broadcasts could be used to sell receiving sets. And they could sell other products, too--gasoline, maps, socks, and candy. Many institutions sold or lost their stations to commercial operators. The rush was on, and it led to the establishment of the world's most extensive broadcasting service. In the United States today a home without a radio receiver is a rarity, and some 4,000 AM and FM broadcast stations bombard the airways.



UW President CONRAD A. ELVEHJEM addressing WHA Family Dinner, November 24, 1958

The Wisconsin State Broadcasting Service, as exemplified by WHA, is not typical of American radio. Though it is different, and is studied by visitors from other states and nations, it is largely taken for granted by Wisconsin citizens. It has become the most readily accessible source of educational opportunities to the people of the state.

The educational impact of WHA, and its affiliated State Radio Council FM network stations which relay the programs, was appraised by President CONRAD A. ELVEHJEM, of the University of Wisconsin, at the WHA marker dedication ceremony. The basic policy underlying its development, he said, "has been sound and will provide the right direction for future utilization of radio and television in education generally."

The philosophy reflected in the broadcasting service is that of the University itself--the boundaries of the campus are the boundaries of the state! For about 80 hours each week lectures, courses, discussions, news interpretations, school programs, crop and weather reports, farm and home information, readings, fine music, and specialized service programs of various kinds go out over the airways to homes in every county of the state.

"Our current pattern," said President Elvehjem, "is the most effective one, since it provides unity of direction, solid educational standing, and freedom of operations hard to achieve in any other setting.

"WHA has held firm to its basic purpose: education. It has not gilded the lily. It has sought to present education in an attractive form, and has succeeded. Education can be entertaining; but entertainment is seldom educational. WHA has managed to locate the fine line of distinction in this respect and has operated well within the educational side of this line. There is a real temptation, in this age of mass communication, listener counts, and hidden persuaders, to seek the broadest possible audience with sugar-coated messages. WHA has held aloof from these temptations, insisting always in quality offerings, knowing that while there is sugar enough on the airwaves to satisfy anyone's sweet tooth, the meat of education is hard to come by on most channels," concluded the President.

The 9XM-WHA marker now stands on the Campus near Radio Hall. While it pays tribute to Professor Terry it also honors the thousands of other persons who through the years have believed in the mission of the station and have helped it along its often rugged way. Engineers, technicians, professors, teachers, students, administrators, state officials, legislators, broadcasters--and the listeners--all have had their roles in establishing, preserving, and developing for Wisconsin "the oldest station in the nation."

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ACKNOWLEDGMENTS: Photos: p. 1, State College Board of Regents; p. 4, "Report on the Wisconsin State Colleges;" p. 6, Wis. Soc. for Ornithology; p. 21, Milwaukee Public Museum; pp. 16, 18 and 22, UW Photo Lab; p. 35, Waukesha Freeman (copyrighted--with permission).

Sketches: p. 2, Blue Book, 1881; p. 5, "The Driftless Area of the Upper Mississippi" by T. C. CHAMBERLIN and R. D. SALISBURY in 6th annual report USGS, 1885; p. 7, WALLACE HUGHES in "Fur Bearers and Game Mammals of Oklahoma," Okla. Fish & Game Dept.; p. 10, "How to Know the Spring Flowers" by MABEL JAKES CUTHBERT, Wm. C. Brown Co., Dubuque, Publisher (Copyrighted--with permission); pp. 12 & 13 by MAX FERNECKE; p. 36, by CHARLES SCHWARTZ, courtesy Wis. Conservation Dept.

FREE FOR THE ASKING

The following reprints from the Wisconsin Academy TRANSACTIONS are available to members free by writing to Miss Laurel Nelson, Exchange Librarian, UW Memorial Library, Madison 6, Wis. Listings of other articles will be made in future issues. Number shown indicates volume.

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INTRODUCING

STEPHAN F. BORHEGYI

The new Director of the Milwaukee Public Museum, STEPHAN F. BORHEGYI, will have as his first big job when he takes office on February 1, the revision of 10-year old plans for a new museum building. He brings to the post experience in planning and installing exhibits both in his native Hungary and in the United States, as well as in Guatemala. From 1954 to 1959 he was Director of the Stovall Museum at the University of Oklahoma, where he directed the activities of scientific personnel, head-

ed the acquisition committee, and supervised public relations work and exhibits, both on and off campus.

He attended Peter Pazmany University in Budapest, majoring in archeology, anthropology and the history of art. During the war he served both in the Hungarian Army and as a member of the underground fighting against the Nazis. In 1945 he received his Ph.D. and began work in the Hungarian National Museum. He was Assistant Curator in the Classical and Near Eastern Archeology Section and Assistant Professor of Archeology and Anthropology at Peter Pazmany University when he received a fellowship in 1947 to study in the United States. He did research in anthropology both at the University of Arizona and at Yale University and went on several field trips in Central Europe, Guatemala, Mexico and New Mexico from 1946-58. He became a United States citizen in 1955.

Director Borhegyi is a Fellow in numerous anthropological societies, a board member of the "Museum Standards" committee of the American Association of Museums, and an active member of several other professional groups, serving as editor, lecturer, or officer. He is a prolific writer and has published widely in the fields of museum administration, anthropology and art history, with over 60 titles to his credit.

His wife, whom he met while both were studying anthropology at the University of Arizona, is the former Suzanne C. Sims of Columbus, Ohio. They have three children.



According to a recent report of Acting Museum Director ALBERT M. FULLER, on November 20, 1958 the Common Council of the City of Milwaukee, on a 17 to 3 vote, approved the bond issue of \$7,500,000 for 1959, for a new Museum building. It is hoped that revision of the 10-year old plans will be completed in mid-year and that contracts for construction will be ready in the fall of 1959. WM. M. LAMERS, president of the museum trustees, stated that the board will look for much assistance from the new director, so that the resultant building will be the best that the allotted resources can purchase. # #



DR. WILLIAM DAVISON STOVALL

A UW Retirement Profile

Last July 1, Dr. **WILLIAM DAVISON STOVALL** retired from the post of Director of the State Laboratory of Hygiene but continued under special service contract until Sept. 1, 1959. Active in many other state positions, he is Chairman of the Medical Museum of Wisconsin campaign, connected with the Wisconsin General Hospital, the UW Medical School, chairman of the state board of public welfare, and officer, past and present, of many learned, professional and scientific organizations.

It was in 1914 that the young doctor from Mississippi came to Wisconsin on the advice of the dean of Tulane University Medical School. His plans called for a stay of one year exactly, but after six months he was placed in charge of the laboratory. The challenge of organizing an applied science center for the improvement of public health and the promotion of scientific medical practice became a major ambition, and the "stay for one year" vow was broken. During his tenure, the laboratory volume of work has grown from some 9,000 specimens in 1914 to approximately 500,000 in 1957. The staff has grown from six to 90 people--special sections in the lab now number 17. Each special section of investigation, according to Dr. Stovall, "has been built as the answer to a felt need for application of science."

Born in Longtown, Miss., Oct. 31, 1887, he spent his childhood there and at Sardis, Miss. Biggest single influence on his life was his father, Dr. Joseph Stovall, a general practitioner. Young Stovall was different in that he "was fascinated by all the new wonders of chemistry, bacteriology, immunology, and the like," and wanted to be where he "could use all scientific and teaching knowledge which medicine had available." The fourth generation of a family of physicians, he received his general education at Mississippi College and medical training at Tulane University. Internship was spent at St. Vincent's Hospital in Birmingham, Ala., and the U. S. Marine Hospital in New Orleans.

Now, nearly a half-century later, the official record of Dr. Stovall's activities is voluminous. He has served on every conceivable kind of committee in the interests of public health and the advancement of medical science. To specify in any one area is to neglect another of equal or greater importance. As a medical educator, he has taught Wisconsin fathers and sons in the medical profession. These classroom contacts have held true through the years and are reflected in hygiene laboratory operations all over the state.

What has pleased Stovall most in his stay in Wisconsin? In his words, "The extension of laboratory services to every doctor in all parts of the state, thereby helping to create a more sanitary and healthful environment in which to live. . . .

Offering laboratory services to doctors in isolated areas which they couldn't get otherwise." As others see it, "Unstinting service to the public health."

Climax of this campaign to safeguard the health of the people of the state was the erection of the new State Laboratory of Hygiene building in 1950. Built at a cost of \$1,600,000, it is described by Dr. Stovall as "Beautiful, functional, and adequately staffed for the application of the various physical sciences to the control and prevention of disease." Others call it, "A living monument to his efforts in this state." His career has been a series of challenges well-met.

Some of the important positions in his record are: activity in the Wisconsin division of the American Cancer Society; the National Institute on Cancer Control; the National Advisory Committee on Medical Education; the house of delegates of the American Medical Association; the National Health Resources committee; the State Medical Society; the Dane County Medical Society; ad infinitum--all are part of his public health record of service. Outstanding service to state physicians has gone beyond the hygiene laboratory operations; Dr. Stovall is a past president of the State Medical Society and recipient of that group's highest recognition, the Council Award of Honor.

Due for increased attention in the near future is the campaign for the Medical Museum of Wisconsin to be located at Prairie du Chien--general chairman, Dr. Stovall. History of medicine, a strong amateur interest, he says, is the closest thing to a hobby in the Stovall personality. People, and their welfare, seem to be his hobby--and his work has been his life.

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A NOTE ON THE COVER PAINTING

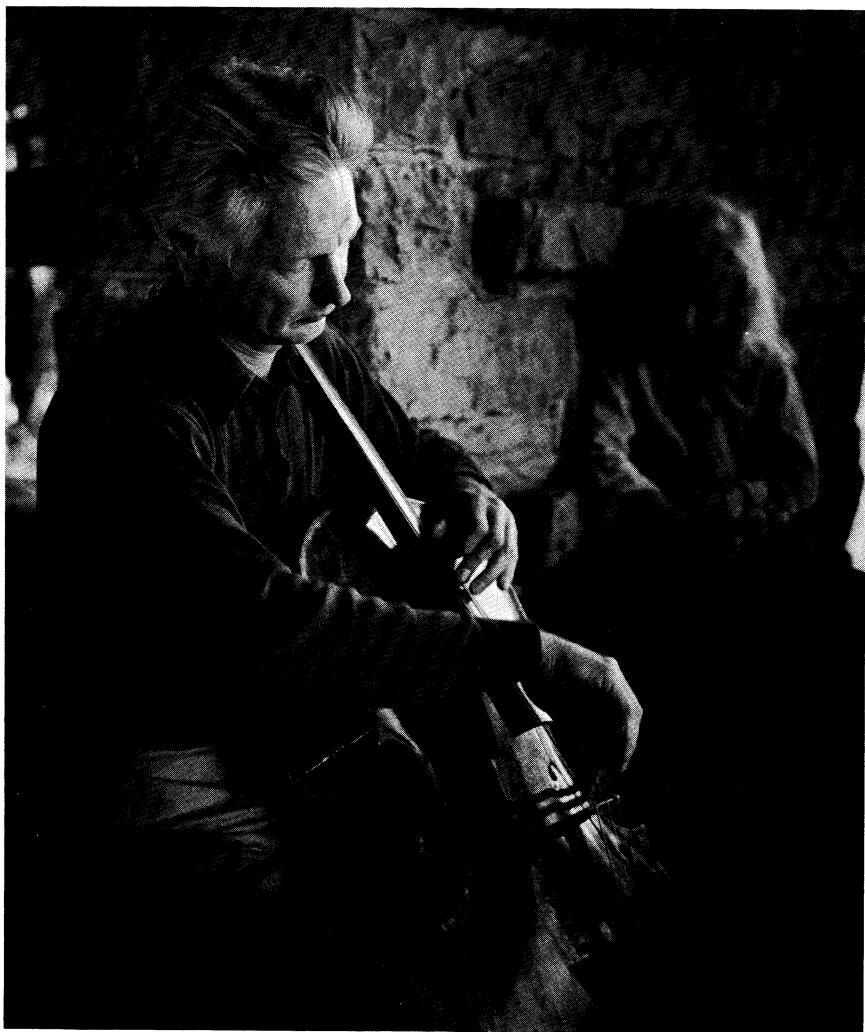
EDWARD A. BOERNER, cover artist for this number, might well be called the dean of Wisconsin's high school teachers of art. During the years of his teaching in Milwaukee schools thousands of students in his classes have developed their interests in the arts. Among them have been many of special talents who have entered the arts professionally with the stimulus of his encouragement.

He was born in Cedarburg, has studied at the Layton School, the Milwaukee Normal School art department and the Minneapolis Art Institute. He holds the Bachelor's degree from the University of Wisconsin and his M.A. from the University of Iowa.

His painting is predominantly in the transparent water color medium and his subject matter largely the Wisconsin landscape, especially of the Holy Hill region. Sculpture in wood and the cutting of block prints are the other media in which he has done considerable work.

Through the years he has been active with the Wisconsin Painters and Sculptors, and has been a regular contributor to state and regional exhibitions. Outside of his teaching activities he has become best known in recent years as Director of the Painting, sculpture and graphic arts section of the Art Exhibitions at the Wisconsin State Fair.

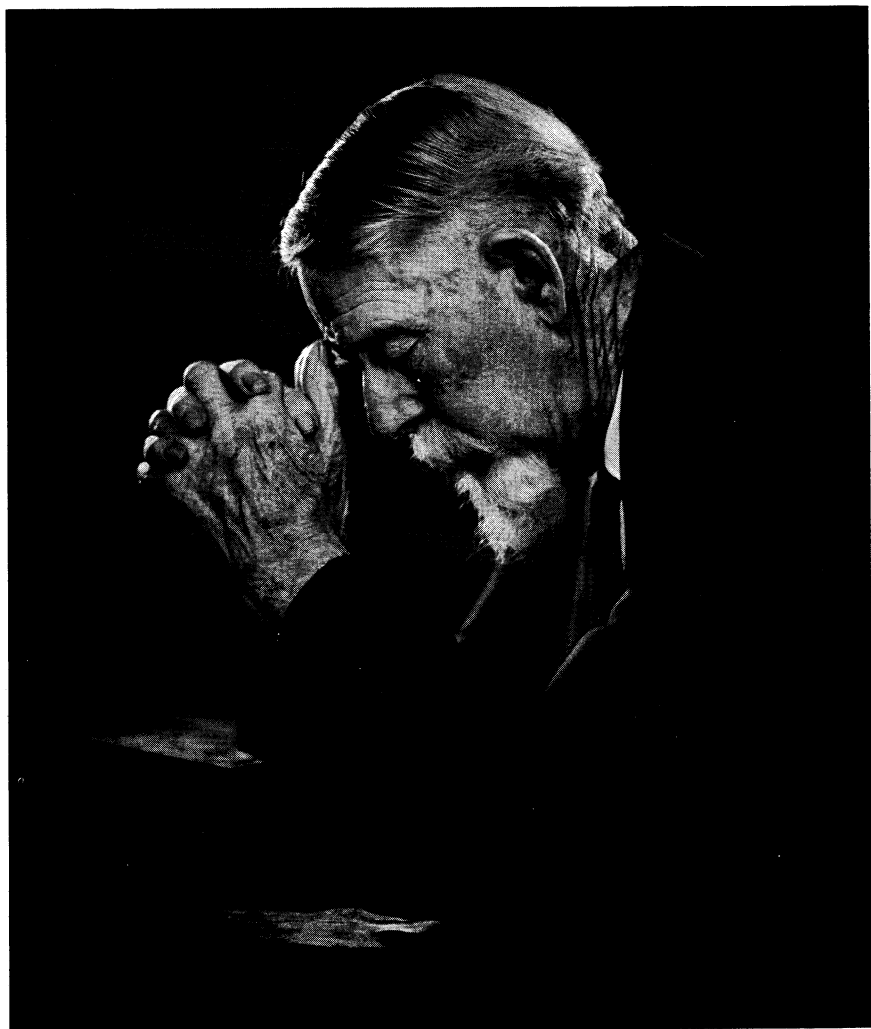
--- Frederick M. Logan



THE CELLO PLAYER

Herbert Fritz, the architect from Spring Green, and his daughter Theresa were used in this picture, the setting in the loggia of his studio residence. This was an experiment in available light, using a soft and sentimental theme and a basic diagonal composition. While this picture was successful in state and national competitions, it means more than just that--the Fritz family are warm friends and are creative people with wide ranging interests, one being here portrayed.

EDITOR'S NOTE: Academy member EDGAR L. OBMA of Dodgeville is a Director in the Professional Photographers Association of Wisconsin and member of the Photographic Society of America as well as other similar groups. The editor asked him to present the two of his pictures he felt were most interesting and this is



MOODY PRICE, DODGEVILLE

While old Moody was the local dog catcher, auctioneer, Tiler of the Masonic Lodge, watch repairman and general handyman, he was a fine Christian gentleman and respected by all. He was my first choice when I planned this picture for his colorful appearance, character and ability to catch the spirit and idea from a sketch and a little direction. The triangular composition and the feeling of reverence gives stability and mood to the picture which has made it successful in competitions.

his selection. Both pictures have won top awards at the State professional convention competitions and both are in the Traveling Loan Collection of their National Association. It is easily seen that Edgar L. Obma is a master of photography. # # #



DOMAIN OF LETTERS

Academy member MARIAN PAUST of Richland Center has contributed the poem, and another member, Dean LINDLEY J. STILES, has granted permission to use his "Parable of the Lamp" (which appeared in the March 1958 issue of The Nation's Schools and is reprinted with their permission) and the "Dual Mandate," a summary of a speech presented to the Wisconsin Federation of Teachers in Milwaukee on November 6, 1958.

Academy member IRA L. BALDWIN and Mrs. Baldwin rendered in such distinguished prose the following travel impressions for private, limited distribution that they have been besought to allow publication in The Academy Review. Such permission they have graciously granted. The "memento" referred to in paragraph 4 with an editorial adaptation of the original is a work of art by C. V. STUBBE-TEGLBJAERG and made available in lovely copies by the Baldwins.



THE EXILE



The old man loved the ship he took to sea--
The battered prow that broke each creamy wave,
The staunch gray mast which clung tenaciously
To salty planks with sea leg aged and brave.
And as he paced the deck, watched sun and stars,
This world was his -- in turn possessed his bone;
The glory of bright sunlight on wet spars
Was all the gold he wanted for his own.
For him, time would not wait -- the years weighed down;
And so he went ashore as sea men will
And walked a stranger on the streets in town--
His lonely ears heard only sea sounds still.
Asleep, awake, he knew the haunting pains
From salt sea water flowing through his veins.

--- Marian Paust



THE PARABLE OF THE LAMP

By Dean Lindley J. Stiles
UW School of Education

There developed in the Twentieth Century a people, strong in spirit and talents, kind of heart, and dedicated to liberty. They grew and flourished in a land of rich resources, aided by youthful imagination and daring, until they were known throughout the world.

Among these fortunate people was placed a lamp of learning. They were told by the genie who presided over it: "Attend this lamp well and it will grant you wishes beyond your fondest dreams. It has the magic power to heal the sick, to harness the forces of nature or to make all the world beautiful and good. But remember, the lamp cannot wish for you; this you must do for yourselves. And if the wish is truly the desire of all the people, it shall be granted."

Being young and headstrong, many of the people did not respect the power of the lamp. Some questioned its reputed magic. They impudently asked how a lamp with such a tiny, flickering flame could be so powerful. The genie was ridiculed and abused and assigned to low status among them. When they did agree upon wishes for the lamp, like Aladdin of old, they asked for an abundance of food, magnificent dwelling places, wealth and scientific baubles for their comfort and entertainment.

One day as the people reveled in their push-button wonderland of automatic appliances, high-powered automobiles, and dreams of grandeur, they were startled by the appearance of a new star moving rapidly across the heavens. Then they realized that this magical wonder was the gift of the lamp to the people of another land, they were filled with fear and apprehension that their freedom was in danger. In anger they began to cry out indignantly that they had been cheated by the lamp of learning. They cursed the genie for not making them wish for such a wonderful scientific achievement. Some threw sticks and stones to drive away the faithful few who had endeavored to attend the lamp. Many who previously ridiculed the genie began to fight among themselves for his favor. Each proclaimed loudly that others were to blame for this loss of face before the world. Committees were appointed to find a suitable scapegoat to compensate for their damaged pride.

Above the din and confusion could be heard one distinct and persistent sound: an ominous, intermittent radio signal emitting from the new man-made miracle encircling the globe. It reminded all that the magic lamp of learning, if properly attended, has power to grant wishes beyond man's fondest dreams. It echoed the advice of the genie that the lamp cannot wish for a people. This they must do for themselves.

- - -

NEWS NOTE: At the midwinter meeting of the Wisconsin Fellowship of Poets, Mrs. EDNA MEUDT's prize-winning poem, "Young and Fair was Christopher," was read by Professor RUTH MARY FOX of the UW-M English Dept. In the panel discussion on "What is Poetry?", two Academy members participated--Mrs. Meudt and Mrs. ROSE B. McCALMONT, who acted as moderator. It was announced at the meeting that among those included in the International Who's Who in Poetry were three Academy members--Mrs. Meudt of Dodgeville, Mrs. McCalmont, Janesville, and HELEN SMITH, Evansville. - - -

AMERICA'S DUAL MANDATE: MASS AND QUALITY EDUCATION

By Dean Lindley J. Stiles
UW School of Education

Self-government requires the education of all--each to the maximum of individual capacity and talents. This premise carries the mandate for both universality and quality in educational programs. That the achievement of both these objectives is a difficult assignment there can be no doubt. That many citizens and teachers themselves find such a conflict between those two aims that they would sacrifice one for the other has been documented anew in recent months. Yet to fail to achieve either will lead ultimately to the destruction of democracy and loss of individual freedom. Government of, by and for the people is possible only so long as those who govern are educated to their task. The quality of government, the preservation of freedom, and the maintenance of happiness and the good life for all depend upon conservation to a maximum the intellectual resources of every child--especially those of greatest potential.

Some outstanding strengths of our schools are:

1. Local control by elected representatives of the people.
2. Equality of educational opportunities in terms of individual abilities and goals.
3. The chance extended to each child to go as far educationally as his intellectual capacity, initiative and hard work will carry him--regardless of race, creed, social or economic status.
4. The breadth of liberal education for all extending through four years of college.
5. The emphasis upon citizenship training.
6. Programs of vocational education, art and music to supplement basic academic courses.
7. Emphasis upon individual initiative, self-direction, creativity, self-discipline.

Weaknesses that have been identified are:

1. Failure to press academically talented to "play over their heads" intellectually.
2. Failure to provide professional conditions for teachers--in terms of salaries, teaching loads, equipment and supplies, continued scholarship and research, supplementary services.
3. Lack of emphasis on basic educational research.
4. Failure to provide schools large enough to be economically and educationally efficient.
5. Failure to provide sufficient financial support for schools.

- - -

SIGNIFICANT QUOTATION

In remarks at the opening day program of the Wisconsin Centennial Year, Jan. 5, 1948, the late MARVIN B. ROSENBERG spoke on "Wisconsin in the Future": "In my opinion the principal and lasting resource of Wisconsin is the character of its people. Not only Wisconsin, but the country as a whole, will be obliged in the coming century to rely more strongly than ever upon the character of its citizenry. A mere recital of the advances made in the last century raises in the mind of every thoughtful person the question: Will we in the coming century have the spiritual strength and moral courage to make a wise use of the great forces which in the recent past have been loosed upon the world? Is it not true that compared with our material progress our spiritual development lags?"

VIGNETTES—AND VISIONS

By Ira L. Baldwin

Special Assistant to the President, UW

Memorable flight! Scandinavia and the Netherlands! Wonderful weeks in these interesting and beautiful countries!

Practising democracies all--marching ahead in education, social welfare, regional planning. Courageous and charming citizens--enriching the present with the past and facing the future with vision--conserving every resource--in their crowded but immaculate cities, in their forests, in their rivers and on their precious land--the flats of Holland, the rolling countryside of Denmark, the mountains of Norway and Sweden--always conscious of the sea with its food, transportation, trade, tragedies.

People happy in their arts, crafts, and music--and generous in their hospitality. Wonderful cooks--offering preserved ginger in whipped cream, tiny shrimp, smoked salmon, delicious fruits, delectable breads and pastries, radishes for breakfast, and cheese!

One memento [its exquisite pastels alas! not reproducible here] is the winter view of a part of East Jutland which we investigated one July day--artifacts from the Stone Age, Stonehenge in miniature, sandy slopes with a double path tracing the road, tidy farm fields, medieval Ribe with stork sentinels nesting on the roofs of the beautiful old houses, Aarhus in a setting of hills and harbor--combining the venerable with effective modern.

COPENHAGEN--Sightseeing strolls, fascinating shops, graceful strong furniture fashioned of teak, exquisite handwrought silver, Tivoli, the Little Mermaid, and loveliest of all--the grey-blue haze that fills the sky at twilight and rests captive in porcelain and paintings.

OSLO--Gentle rain and pale fog--veiling the hills and the ships in the harbor but deepening the color of the monumental City Hall--sun staring in the window at two o'clock in the morning; luncheon in the park with the slow rain dripping from the canopy above; glorious hours at the Outdoor Museum and the exhibition of the Viking ships--ships which sailed, a thousand years ago, in the Mediterranean, along Britain's shores and in the North Atlantic!

STOCKHOLM--A lovely view from our floor-to-ceiling window in the Hotel Foresta! In the morning the shoreline of Lake Mälaren slipping through the misty veil; during the day dignified boats making their way up the sound while skittish ferries race across; in the evening the lights peopling fairyland. Old Town remodeled for 20th century living--new suburbs recently translated from planning sessions into brick and steel realities--shops presenting a people's art--magnificent scientific laboratories--the handsome City Hall.

AMSTERDAM--Quiet canals and busy ones, bicycles en masse, museums, flowers everywhere! Beautiful flower stalls in the street, amazing amaryllis in garden shops and hundreds of thousands of blossoms auctioned to the world from the Aalsmeer markets. But the most exciting view was that of the recently established polder of Eastern Flevoland, a new province of 135,000 acres of reclaimed land, complete with pumps and dykes, farms and towns.

Finally there was the thrilling view of Lake Mendota--and home!



JUNIOR ACADEMY NEWS

Arrangements of the Wisconsin Junior Academy of Science are undergoing considerable revision this year. District meetings have grown so large, requiring in some cases several simultaneous sessions, that the state committee decided to separate the La Crosse and Milwaukee districts into two areas each. Tentatively, plans called for six districts with meetings at cities listed: southeastern, Kenosha; Milwaukee area, Milwaukee; northeastern, Appleton; north central, Stevens Point; northwestern, possibly at Ashland; and west central, La Crosse. Since the state committee met, there has been the initiation of a seventh district in the southwestern part of the state to meet at Platteville. These seven meetings are all for senior high school students from the 10th grade up. The best papers of each of these meetings will be presented at Platteville on May 2 at the time the Senior Academy meets. Dates of district meetings already set are March 21 at Lawrence College, Appleton, and April 18 at Wisconsin State College, La Crosse. If you wish to be notified of dates of any of the other meetings, write to the chairman of the Junior Academy Committee, Birge Hall, Madison 6.

There is a distinct possibility that there will be two meetings at the junior high level this year. Teachers in the schools which have participated in the past are being polled to consult their wishes in this matter. Like the meetings of the senior students, the junior high school meeting last year at Kenosha was so large that three simultaneous sessions were running.

Committee changes have also occurred in the Junior Academy. RAY SUCHY was resigned from the state committee and HARRY A. WOLFF, Supervisor of Science and Mathematics of the Milwaukee Public Schools, has taken his place. Term of office for chairman of an area is two years; current area chairmen (including several newly elected) are:

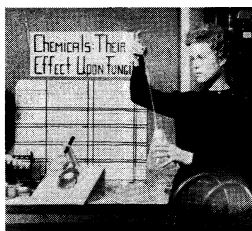
Milwaukee, JEROME FISHER, Nicolet High School, Milwaukee
Southeastern, MARY A. DOHERTY, Mary D. Bradford H.S., Kenosha
Northeastern, ROY WENZEL, Kaukauna High School, Kaukauna
North central, ROLAND TRYTTEN, Wis. State College, Stevens Pt.
Northwestern, SISTER M. GEORGETTE, DePadua H.S., Ashland
West central, SISTER M. THOMASETTE, Aquinas H.S., La Crosse
Southwestern, HAROLD GODER, Wis. State College, Platteville

To help with prizes and awards of the Junior Academy, two science clubs have voluntarily paid \$5.00 instead of \$2.00 annual dues--the clubs of Nicolet High School, Milwaukee, and Mary D. Bradford High School, Kenosha.

CHEMICALS: THEIR EFFECT UPON FUNGI

By Jane Horock

Lincoln High School, Wisconsin Rapids



My interest in chemotherapy began in my studies of it in biology, chemistry, and recent articles in newspapers and magazines. The purpose was to determine the effect of chemicals upon fungi by comparing laboratory remedies such as copper sulfate and potassium hydroxide, to commercial preparations such as penicillin and the sulfa drugs.

To begin work on this project, I grew bacteria on culture media, which is made up of a proportional amount of agar, beef extract, and water. The agar in this formula is a gelatine-like substance obtained from seaweed, and corresponds to the soil in a garden. The beef extract corresponds to the fertilizer that would be added to this soil. To make the solution on the basic side of pH, I added a small amount of sodium bicarbonate. pH is the hydrogen-ion concentration which measures acidity and alkalinity. It is based on a scale of one to 14, 7.0 indicating neutrality, the numbers below acidity and those above alkalinity.

The next step was to make up several hundred petri dishes and about the same number of slants in test tubes. Then began the work with lab chemicals to determine their effectiveness. I started my experiments with simple lab chemicals such as copper sulfate and carbolic acid. I wished to compare their killing power with that of the commercial drugs, St. 37, Lavis, achromycin, etc.

Using sewage from our local sewage disposal plant, I innoculated the petri dishes. I chose sewage because it produces an abundant growth of bacillus colli, that type of bacteria present where there is water pollution. It is also associated with the alimentary canal of humans and is therefore the type I would use with these experiments since I am working with drugs used on human diseases.

Using various degrees of concentration and different lengths of time I tried to determine at what time and concentration the lab chemicals would be effective killing agents. They are not, however, 100% effective and the correct concentration and time must be determined in order to have them do their work.

My work with the sulfa drugs and penicillin was much more useful. In this phase, I used nearly the same procedure as before. The only difference was that the culture media was innoculated with saliva instead of sewage. In every test that I ran, there was no regrowth of bacteria in the slants, proving the potency and value of all these drugs.

To further determine the bacteria killing value of commercial products, I turned my attention to antiseptics and mouthwashes. Of samples obtained at local drugstores, I chose three: St. 37, Lavis, and Glyco thymoline, to test. St. 37 was the only one that was an aqueous solution that could be figured on a grams per liter of water basis. The others were all solutions containing varying percentages of alcohols, were called commercial compounds by the druggists. Again using the same procedure as used with the sulfa drugs, I observed their work on the basis

of varying lengths of time. I had very favorable results and found that the commercial antiseptics proved quite effective.

Through this work I have learned much about the products I used and most important of all, I found for myself that chemicals do have a great effect upon fungi and bacteria. The commercial sulfa drugs, penicillin, antiseptics, and mouthwashes are, for the most part, exceedingly important in preventing and combating diseases of today. It is only if we were without them for a time, that we would realize how much we do rely on them for health and happiness.

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RESEARCHING ELECTRON OPTICS

By Glenn Kuswa

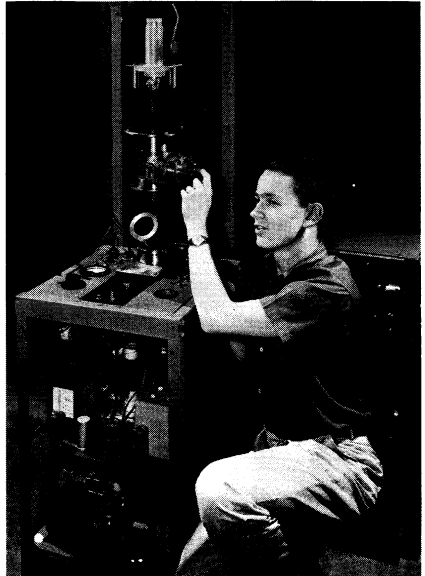
Wauwatosa High School, Wauwatosa

After more than two years of research and experiment, and about 1,800 hours spent on design, machining, assembly and testing, I succeeded in projecting an enlarged image on the fluorescent screen of my home-made electron microscope.

My main purpose is to develop an improved electrostatic lens to replace the much more complicated magnetic lens used in commercial electron microscopes. I am just beginning to experiment with actual lens designs. Within two months I hope to build and test several improved lenses with original features. If successful, I'll be able to claim a definite improvement in electron microscope design.

An electron microscope can theoretically give magnifications up to nearly 500,000, while light microscopes are limited to 2,000 diameters. Improved magnification is possible with high-voltage electron beams because they have much shorter wave lengths than light beams and can therefore resolve objects better without distortion.

My electron microscope consists of four vacuum pumps in series, a vacuum gauge, a high-voltage supply ($\frac{1}{4}$ ma. at 45 kv. maximum), a filament supply, and the microscope body. This microscope body contains the filament (source of electrons), the anode assembly (to accelerate and limit the electron beam), the object holder, lenses and a fluorescent screen--all in a high-vacuum chamber. Electrons have low penetrating power and require a high vacuum (comparable to that in a radio tube) for optically perfect projection. Because of this low penetrating power, the objects themselves must be extremely thin and mounted on a small piece of fine mesh screen rather than on a glass slide.



I designed and built everything in the accompanying picture except three vacuum pumps, which I completely rebuilt. Since I owned only a little test equipment, I built the microscope in stages so that I could use its components for testing purposes. Each phase provided some means of testing the preceding one.

Currently I am working on lens design and construction. Solid materials do not transmit electrons, which are, however, easily deflected by electrostatic or magnetic fields. I am using a saddle-type lens which basically consists of three concentric washer-like electrodes of brass held in position by Lucite. The two outer electrodes are held at ground (positive) potential; the center one is held at the same high-voltage negative potential as the electron gun. I am going to interpose a series of floating "keeper" electrodes between the center negative electrode and the outer positive electrodes of the lens. My aim is to eliminate inter-electrode arcing, the main objection to electrostatic lenses.

In the course of building the equipment, I constructed four vacuum pumps, each an improvement over the previous one, and designed three separate electronic circuits. These circuits had to be rewired up to five times each before they performed properly.

Most of my basic materials came from the local junk yard and from Government surplus. The work was done in my home shop with a small metal lathe, a grinder and a power drill. Total costs amount to about \$250, against costs ranging from \$18,000 to \$27,000 for commercial units.

The result of all the work done so far is an almost-finished electron microscope with patentable pump improvements and many original features.

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THE HYPERSONIC WIND TUNNEL

By Thomas Gregory
Nicolet High School, Milwaukee

Since the advent of the modern missile, many new and interesting problems have arisen. One of these is the choosing of proper metals and shapes to use in these new high speed aircraft. This was the problem that I chose to do research on.

To understand this problem further I had to gain a basic knowledge of the scientific principles involved. One of these principles is that as an object is passed through air at a high speed, heat is produced. This is caused by the air molecules producing friction against the metal molecules. With this in mind, I tried to figure out a means by which I could produce this effect in the laboratory.

The first means by which I could produce this effect was to pass air across my model at high speed. This I found to be impractical because it is almost impossible to get air to such high speeds in the laboratory. I then decided that I must add the heat to the air stream. To add the heat I used an oxyacetylene torch. My tunnel, then, is called a hypersonic wind tunnel. This means high heat and high speed.

Because of the high heat used, ordinary metal tunnels would melt. I then had to find a material which could be used success-

fully under high heat. That which was found most satisfactory was a high grade porcelain material. I used this in the three most important parts of the tunnel: the jet, the working section, and the diffuser. To make these parts I first made a wooden model around which plaster of Paris was poured. When this plaster mold dried, liquid porcelain material was poured into the mold. When a thin layer was formed around the edge of the mold, excess material was poured out and the porcelain form fired. To hold these three objects a metal tube was used. In the tube a hole was cut to serve as a window. Over the hole a mica sheet was placed to protect the viewer from heat. This makes it possible for a person to watch the model in complete safety.



The ceramic jet forms the stream of hot air into an even flow. The working section controls the air as it passes the model, and the diffuser evens the stream as it passes out of the tunnel. The walls of the tunnel were sanded extremely smooth, because any imperfection in the wall would cause the air to hit the model at the wrong angle causing overheating on the model which would cause the results to be inaccurate.

To test the relative speed that I was producing I used a thermo-couple and a chart correlating heat to speed. I used a thermo-couple because all other means of temperature measurement would melt at this temperature. The couple is made of iron-constantan wire and is connected to a very sensitive meter calibrated in degrees Fahrenheit.

In order to keep my results as accurate as possible I used the following procedure in tests I conducted. First I would place the thermo-couple in the tunnel and set the torch for the heat desired which for my tests was 2200°F. Then I placed my model in the tunnel for exactly 45 seconds and recorded the results. The cones were tested for such a short time because as the missile left the atmosphere the heating subsided as friction with the air decreased.

I tested many metals in the tunnel; some were copper, brass, bronze, steel and stainless steel. The latter was found to be the best because a thin layer would stand up under high heat. Iron also stood up under heat but had to be in a solid cone which is too heavy for missiles. Copper was tested to determine shape of the nose cone. A shape of copper was put in the tunnel under low heat and any misshapen parts found by their red glow from overheating. No. 2 cone was the best tested. From tests I have conducted so far I found that nose cone No. 2 made of stainless steel would be best, but I plan further work testing cermats and ceramic nose cones.

Although the ceramic tip would stand up under high heat there are two major drawbacks: ceramic would not stand up under thrust of takeoff; and ceramic if coated over a metal would chip as it heated up due to different expansion rates of the ceramic and the metal under it.

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In Memoriam

Howard T. Greene

1893-1958

HOWARD T. GREENE, well-known midwest dairy leader, died at Waukesha on Dec. 16, 1958. Born in Milwaukee in 1893, he attended prep schools there and in Asheville, N. C., college in Massachusetts, and the University of Wisconsin. After graduating from the UW college of agriculture in 1915, he managed the Brook Hill Farms, which his father had begun to acquire in 1902. Under his direction, the Farms became a pioneer in certified milk and

one of the largest scientific organizations of its kind in the midwest, a dairy research center that attracted world attention.

Mr. Greene experimented both in agriculture and conservation, his work in dairying being the most fruitful. He supported others in this work, one of whom, Dr. Obey Okuyama, built up herds in the early 1930's by the then "new process" of artificial insemination. Probably his greatest satisfaction came from his farm's production of specialty milk largely for the Chicago market. It was used to fill medical prescriptions and for diet patients. Many of the research projects were carried on in co-operation with the University of Wisconsin.

The Brook Hill Farms herd of 415 dairy cattle was sold in October, buyers from all over the United States participating in the auction. Mr. Greene gave as reasons for dispersal of the "doctor's dairy herd" the severe summer drought, the rapid advance of residential development in the area, and shortage of competent help at wages milk checks justified, together with rising costs in operation.

Mr. Greene's hobby of conservation resulted in the planting of more than 80,000 trees on his property, improvement of creeks, and stocking of fish.

He was active in the Republican state organization and in 1934 ran for Governor. His work in progressive agriculture is reflected in the many groups he helped to organize and the boards on which he served--the Cash Crops co-op, Waukesha Cooperative Breeding Assn., Wis. Scientific Breeding Institute, American Dairy Federation, and other national dairy groups. In addition he was an active UW alumnus, a founder of the University of Wisconsin Foundation and a director since its beginnings in 1945. A distinguished service award was presented to him by the Wisconsin Alumni Club of Milwaukee in 1957. He had been a member of the Wisconsin Academy since 1944. (Adapted from Waukesha Freeman.)

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THE BOOKSHELF

POND CULTURE OF MUSKELLUNGE IN WISCONSIN

By Leon D. Johnson

Wisconsin Conservation Dept.
Madison 1, Wisconsin
1958 54 pp. Free

(Technical Bulletin No. 17 with 21 photos, 2 figures, 7 tables, with abstract, summary, and 36 literature citations.)

This interesting booklet "describes the methods for muskellunge propagation that have been found most successful." The report summarizes five years of field and laboratory study of the life history, feeding habits, growth, and survival through the first summer of a highly prized game fish. Although Wisconsin has propagated her official state fish for almost 60 years and the traditional work of trapping adults, stripping eggs, and rearing fish in ponds is clearly explained, the study emphasizes the complexities of modern fish culture.

Nearly every Academy member will find mention of his special interest in this investigation. The descriptions of the phenology of spring spawning runs, the cold and wet spawn-taking operation, and the behavior of young fish include some discerning naturalistic observations. The embryologist can appreciate the studies of egg quality, viability, and the hardening process. Invertebrate zoologists will understand the difficulties of culturing small crustaceans in mass on a year-round basis as a food supply. Vertebrate zoologists and ecologists will find a good chain of life in the forage fish program worked out by the Department to feed the voracious, predatory muskellunge fingerlings. The intricacies of pond fertilization, water chemistry, and eradication of unwanted rooted plants and filamentous algae by chemical means will interest chemists and botanists alike. Control of predaceous insect larvae and adults in the rearing ponds is a story for the entomologists.

The work was done at the Woodruff and Spooner facilities and in nearby waters. It was a team effort between fish-culturists, biologists, fisheries managers, and administrators which also stimulated some interstation rivalry in testing new fish rearing techniques.

Two closely related subjects are intentionally excluded from the report; one on the new technique of rearing warm-water fishes entirely in hatchery troughs, and the other on returns of hatchery reared fish to the creel. Perhaps both subjects will appear in future reports as timely and well-written as this one.--Raymond Johnson, U. S. Fish and

Wildlife Service, Washington, D. C.



POLITICS IN WISCONSIN

By Leon D. Epstein

 Univ. of Wisconsin Press
 430 Sterling ct., Madison 6, Wis.
 1958 218 pp. \$3.50

The smashing victory of Wisconsin Democrats in November climaxed more than a half-century of state politics as varied and dramatic as any in the history of the Nation.

It began when Bob LaFollette captured the Republican gubernatorial nomination in 1900, opening 32 years of political warfare fought almost wholly within the ranks of the Republican party. It included a third party which temporarily dammed the New Deal tide in Wisconsin, and a senator whose name became an ism. It may very well have closed in 1958 with a return to two-party politics in Wisconsin.

Politics as intense and inventive as this demands analysis--both for its own intrinsic interest and for what it can tell us about the patterns of American party politics generally. Utilizing a variety of research tools, Professor Epstein has done a convincing and satisfying job on both these counts. On one level, it fits together in a sense--making whole more old and new information about the State's political life than will be found anywhere else. On the other, he has made a significant addition to our growing comprehension of the American party system through the comparative study of state politics.

The book is carefully but unobtrusively, documented, scrupulously fair, and quite readable--Ralph K. Huitt, Political Science Dept., Univ. of Wisconsin, in 1958 Christmas Book Review, Univ. Co-op Book Shop

FOREST SOILS: THEIR PROPERTIES AND RELATION TO SILVICULTURE

By S. A. Wilde

 Ronald Press, New York, N. Y.
 1958 537 pp. \$8.50

The book is divided into two parts. Part I, "Soil as a Medium for Tree Growth," covers 317 pages, most of the material relating to forest soils in the conventional sense. . . dealing with the history of forest soil science, soil minerals, soil organisms, forest humus, soil formation, and the major soils groups, physical and chemical properties, and soils-plant correlations. . . . Part II is concerned with practical soil problems such as the management of nursery soils, the control of parasites and weeds, soil classification and analysis as a guide for reforestation, the improvement of unproductive forest soils, and the effect of soils upon silvicultural cuttings.

The section on nursery soils seems to be particularly valuable and reflects the author's wide experience as a consultant on nursery soil management. The discussion of soil improvement benefits a great deal from Professor Wilde's own knowledge of such work in northern and eastern Europe.

The book seems to this reviewer to possess two outstanding qualities. First, it provides the American forest soils specialist with a good introduction to the Russian, German, and other European forest soils literatures, and with concrete examples of the work of men in these countries. . . . The second and more important outstanding quality of the book is its documentation of the extensive investigations of the author, giving us his mature evaluation of his own contributions and presenting many detailed examples involving the forest soils and vegetation of the Wisconsin region. --Abstracts from review by Stephen H. Spurr, U.Mich., in Journal of Forestry, July 1958.

THE FRONTIER IN PERSPECTIVE

Edited by Walker D. Wyman
and Clifton B. Kroeber

Univ. of Wisconsin Press
430 Sterling ct., Madison 6
1957 258 + xx pp. \$5.50

A welcome may be accorded to the 13 essays by as many authors published in this volume. The essays were delivered as lectures at the University of Wisconsin in the summer of 1954 and deal with the Frederick Jackson Turner interpretation of the frontier. Both Eastern and Western world frontiers are treated, with emphasis on the American expansion. Among the contributors are Academy member FREDERICK G. CASSIDY, "Language on the American Frontier," and Academy member KROEBER, serving as one of the editors.

DOUBLE OR NOTHING

By Phoebe Erickson

Harper & Brothers, New York, N.Y.
1958 128 pp. \$2.75



The author-artist of such favorites as Daniel 'Coon and Black Penny is well known for her books with their real children and their rich and pervading sensitivity to nature and wild things. Academy member PHOEBE ERICKSON tells the story of Jeff and Ellen Gates, who wanted a dog of their own. It



never occurred to them, when they moved to Vermont, that they would find their dog, or that he would turn out to be twins. The children knew that their parents would not approve of one homeless and hungry black and white dog, let alone two. How Jeff and Ellen solve the problem to everyone's satisfaction, including the dogs, Double and Nothing, makes a story rich with humor, mystery, and excitement.

A HISTORY OF DAIRY JOURNALISM IN THE UNITED STATES, 1810-1950

By John T. Schlebecker and
Andrew W. Hopkins

Univ. of Wisconsin Press
430 Sterling ct., Madison 6
1957 \$6.00

Although the book is based upon the journals of the dairy industry it becomes more realistically a panorama of the changing attitudes and activities of the industry itself. Mainly this is carried out by seeing the way in which five generations of dairy journal editors have reflected their own times. Exacting scholarship and readability have been combined with an interesting study of the opinions, trends, and methods of the past to bring a very excellent reference to the present generation.--From the Wisconsin Alumnus, February 1958.

SCIENCE IN A TAVERN

By Charles S. Slichter

Univ. of Wisconsin Press
430 Sterling ct., Madison 6
1958 186 pp. Paper \$1.00

A new paperback reprint containing ten essays which, as the late Dean Slichter states, are the by-products of a busy teacher's life. The reader will find a wealth of facts, wit, humor, common sense, and clear and direct expression of subjects ranging from the story of the founding of the Royal Society of London to Dean Slichter's own philosophy of living.

MISCELLANEOUS BOOKS
AND BOOKLETS

These recent publications of interest are free from sources listed unless otherwise indicated. Asterisk indicates that one or more of the

authors or editors is a Wisconsin Academy member.

From UW Coll. of Agr. Bulletin Mailing Room (Madison 6): "75 Years of Research in the Service of Mankind - 1883-1958"; "Agricultural Extension in Wisconsin" (Rpt. for 1957); "Rabies--How It Spreads--How to Control It"; "Protecting Trees Against Oak Wilt"* by J. E. KUNTZ and A. J. RIKER; "Controlling Brush, Stumps, and Small Trees with Chemicals" by D. R. PETERSON and K. P. BUCHHOLTZ; "Farms or Forests--Evolution of a State Land Policy for Northern Wisconsin, 1850-1932" by VERNON CARSTENSEN (illust. by BYRON C. JORNS in 130 pp.--to be reviewed).

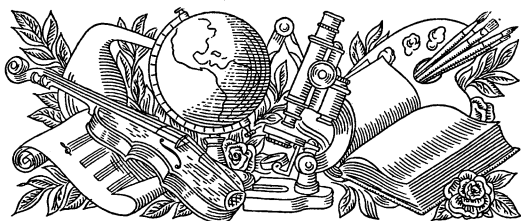
From other State Agencies or institutions as noted: State Dept. Agr. Bien. Rpt. 1957-58, "Moving Forward with Wisconsin Agriculture"; State Bd. of Health (Comm. on Water Pollution), "Sewage Stabilization Ponds in Wisconsin"* by KENNETH M. MACKEN-THUN and CLARENCE D. McNABB; State Hwy. Comm., "How Wisconsin Buys Highway Right-of-Way"; Conservation Dept., "Forest Resources of Ten Counties in East Central Wisconsin (For. Inv. Rpt. No. 34); "The Eastern Brook Trout--Its Life History, Ecology, and Management"* by JOHN BRASCH, JAMES McFADDEN and STANLEY KMOTEK; and "Factors in Wisconsin Pheasant Production" by FRED H. WAGNER and C. D. BESADNY; Governor's Office Div. of Industrial Development, "Building a Better Wisconsin"; Free Library Commission (State Capitol), "Proceedings of Governor's Conference for Library Board Members," and UW School of Commerce, "Industrial Development Corporations in Wisconsin" by Prof. ISADORE V. FINE; "Higher Education" (Dec. 1958 report of Coord. Comm. for Higher Edu. in Wis., State Office Bldg., Madison 2).

From other sources: "Alaska--Big Land, Big Problems"* by R. G. LYNCH (Milwaukee Journal reprint); "This is Your Milwaukee" by Citizens' Urban Renewal Committee (City Hall, Milwaukee); "Pathway to New Profit--Grant County Digest" by the Grant County Board (Court House, Lancaster); "Great Lakes Fauna, Flora and Their Environment--a Bibliography" by JOHN VAN OOSTEN (Great Lakes Commission, Marvin Fast, Exec. Dir., 1313 E. 60th st., Chicago 37) and from Great Lakes Research Institute, Univ. of Michigan, Ann Arbor, "Currents and Water Masses of Lake Michigan" (Pub. No. 3) and "Exploration of Collateral Data Potentially Applicable to Great Lakes Hydrography and Fisheries;" and "The Menominee Indian Timber Case History--Proposals for Settlement", Yale Univ. School of Forestry, New Haven, Conn.

Available for a price: "The Story of Shorewood Hills"* by a committee including Academy members ANDREW W. HOPKINS (Chm.), WILLIAM J. P. ABERG, ERNEST F. BEAN and ELOISE GERRY (\$1.00 from Shorewood Hills Village Board, Madison); "Soil Survey of Barron County, Wis."* (Booklet, Key charts, and four very detailed maps, Series 1958 No. 1, USDA, Supt. Documents, Wash. 25, D.C., \$2.00); "Engineering Handbook for Soil Conservationists in the Corn Belt," Agr. Handbook No. 135 USDA, Supt. Doc., Wash. 25, D.C., \$1.75.

Reprints or special articles by Academy members: "The St. Lawrence Seaway" by HARRY C. BROCKEL (Torch, June 1958 of Milw. Adv. Club); "Phytosociology of the Larger Submerged Plants in Wisconsin Lakes" by DELLE N. SWINDALE and JOHN T. CURTIS (Ecology July 1957) and "Territorial Activities of the American Robin" by HOWARD YOUNG (Ibis, Vol. 98).

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STATE AND ACADEMY NEWS

THE ACADEMY'S BUDGET REQUEST

(Editor's Note: The following statement, entitled "The Wisconsin Academy's Budget Request (1959-61) and Its Purpose and Function as a State Agency Membership Organization" was presented on November 1, 1958 to the Director of the State Department of Budgets and Accounts for his information and that of his staff and the Governor-elect. It is printed here for the benefit of those members concerned with the Academy's future financial plans and needs.)

Budget Request:

During the biennium 1959-61, the Wisconsin Academy of Sciences, Arts and Letters (an official state agency with dual status as a private membership corporation similar to the State Historical Society) will operate on a budget of approximately \$20,000. About half of this amount will be from revenue received from membership dues, gifts and sale of publications, while the other half, \$10,000, is being requested from the state's General Fund. This amount is calculated as necessary to take care of the expected \$5,000 annual expenditure for the Academy's TRANSACTIONS.

A brief summary of calculated annual revenues and expenditures is as follows:

REVENUE*

Dues (approx. 1,000 members at \$4.00) . . .	\$ 4,000
Gifts and Interest on Endowment, etc. . . .	500
Sale of publications and reprints	500
General Fund appropriation	5,000
	<u>\$ 10,000</u>

*Does not include services of Exchange Librarian and Leader for Junior Academy supplied by Univ. of Wis.

EXPENDITURES

Publication of Volume TRANSACTIONS	\$ 5,000
Publication of Academy Review	1,600
Services of Editors and Sec'y-Treas.	1,200
Junior Academy Expenses	1,000
Supplies and Postage	800
Annual Meeting Expenses	200
Support of A.A.A.S. and other affiliated groups	100
Contingency	100
	<u>\$ 10,000</u>

Purpose and Function:

The Legislature's Charter incorporating the Wisconsin Academy in 1870 states that its general objects "shall be to encourage investigation and disseminate correct views in the various departments of science, literature, and the Arts." Among its specific objects are such functions as "the formation of a general library" and "diffusion of knowledge by the publication of original contributions to science, literature and the arts."

The Wisconsin Academy's Constitution repeats these goals for "the promotion of sciences, arts and letters in the state of Wisconsin."

These purposes are accomplished in the following ways:

1. Academy Library - In the past 88 years well over 35,000 volumes valued at more than a quarter million dollars have been formed into a valuable reference library. This has been done with the assistance of the University of Wisconsin and through cooperative agreement, the Academy library is integrated with the University Memorial Library and available for use by all professors, students and citizens of the state. To date almost \$200,000 of this value is over and above the state's expenditures for printing Academy TRANSACTIONS and binding of exchanges received from about 600 institutions throughout the world. The annual value of these exchanges is estimated conservatively at \$4,000 and the benefit received in the use of this library each year certainly equals a quarter of this figure in addition. It is felt that this function pays ample dividends to the state and therefore should be paid for from general funds. The need to increase both the size (by at least 100 pages) and quality of the TRANSACTIONS to continue quality exchange relationships requires this increased appropriations request.

2. Junior Academy - The Wisconsin Junior Academy of Science was founded about 1944 and has grown rapidly in fulfilling its purpose to discover and encourage Wisconsin youth with scientific ability. This program was coordinated with the Wisconsin Science Talent Search a decade ago and operated with Senior Academy sponsorship in cooperation with the National Science Talent Search. Junior winners are encouraged through a system of awards and scholarships. The Academy not only presents these, but also underwrites certain administrative costs for operating the several district and statewide meetings. The Academy plans to expend more for this program the next two years because of the rapidly increasing number of participants. The University of Wisconsin assists this project with administrative leadership.

3. Wisconsin Academy Review - This quarterly publication will begin its sixth year in the coming biennium. It is a popular membership-type booklet aimed at promoting the Academy's objects. Each issue contains articles about the sciences, arts and letters in Wisconsin and a special feature is the Junior Academy section which publishes project reports by the winners. The Review generally is credited with the Wisconsin Academy's increasing membership and interest among Wisconsin citizens. When the Wisconsin Academy celebrated its 50th Anniversary in 1920, it had only one member for each 7,520 people in the state. In 1957 the ratio was reduced to one in every 3,196 people. Based on the Academy's rate of growth of 180 new members per year in the last five years, it should have 3,410 members when its Centennial is celebrated in 1970 twelve years from now. This is calculated to be about one member for each 1,217 people in Wisconsin then, based on population projections.

4. Annual Meeting and Special Projects - The Wisconsin Academy's annual meeting is a significant event for the state each year with papers by many leading scholars. In recent years the problems of particular sections of the state were featured. The Academy also promotes special research projects at times, such as the coordinated study of all aspects of the Brule River Watershed which subsequently was published in the TRANSACTIONS.

Because Legislative appropriations in recent years have been inadequate to cover the full cost of TRANSACTIONS publication, the Wisconsin Academy has been forced to draw on its meager savings

to complete payment on these bills. This happened again in the last biennium after the requested budget was cut in half. This year the Academy Council has voted that if adequate money from the General Fund is not forthcoming, they then will contact the University of Wisconsin requesting some arrangement for payment to cover exchange value received by them for the TRANSACTIONS.

It should be noted that the Academy has raised its dues for active members from \$3.00 to \$4.00 beginning January 1, 1959 in order to continue its program and meeting expanding needs and opportunities. Revenue estimates do not count on any significant reduction in membership due to this change, but it is a possibility. Regardless, an active program for inviting greater participation by all citizens in Wisconsin is being carried on continually and no interested person is refused membership. Although the largest single segment of the Academy membership is made up of professors (and in this respect it has a unique coordinating effect for all Wisconsin institutions for higher education) members include persons in all walks of life.

Five years ago former President E. B. Fred welcomed the Wisconsin Academy to the University campus for its annual spring meeting. Some of his comments on the value of this state agency membership organization to the State of Wisconsin are quoted in conclusion as follows:

"The Academy is a necessary organization for Wisconsin; it takes an extremely important part in the cultural and scientific life of the state. One of the unique contributions of the Academy is the way it brings together both humanists and scientists. . . . Our best insurance against stagnation in the future is the sort of work that the Academy is doing to make scholarly and scientific pursuits seem worthwhile to its junior members. Too often we overlook the fact that an active interest in science is lost because the rewards are too meager and the recognition absent or fleeting. The organization of the Junior Academy is an excellent force for meeting this problem among our youth. . . . The Wisconsin Academy has played an important role in the life of Wisconsin and her people since it was founded in 1870. We are proud of Wisconsin and her accomplishments, and the Academy has had no small part in the attainments for which Wisconsin is known."

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Academy member Mrs. ANNE B. LAY, associate professor of biology at Milwaukee-Downer College, has been awarded a Science Faculty Fellowship by the National Science Foundation for 1959-60. She will continue the research she has been carrying on at the University of Chicago, during summer sessions, in tissue culture, to discover the influence of male and female hormones on the differentiation of the duct of the urogenital tracts of fetal rats. In addition to her research project, she will enroll in courses in her field of developmental biology. . . . Prof. FRANCES W. HADLEY, chairman of the department of English, will retire in June, 1959. She has been a member of the faculty since 1920. . . . Academy member ELLA M. HANAWALT, professor of psychology and education, also will be retiring. She has been chairman of the Wisconsin Commission on Teacher Education and Professional Standards this past year.

The faculty of Milwaukee-Downer College voted on January 12 to expand its advanced placement program for incoming freshmen. Heretofore freshmen have been allowed to enter advanced courses on the basis of tests in English, foreign languages, and science,

given at the college during orientation days. Under its new plan, freshmen who have been pre-tested at high school through the Advanced Placement Examinations of the College Entrance Examination Board will be admitted to sophomore and junior level courses in subjects in which they have shown proficiency. Currently another opportunity for the superior student, the special "300" course, is being evaluated by the faculty as a three-year experimental period draws to its close in June. The faculty committee is recommending continuance of this program under which students of higher than average ability have been permitted to take special courses at the "300" or junior level, pursuing a subject of particular interest through individual or group study under faculty supervision. Working at her own rate, a student may do research or intensive reading, or she may write a thesis on her special subject. Without inflating the catalog or overloading the curriculum, such special tutorial and seminar courses permit a student to probe more deeply into a subject than is usually possible at the undergraduate level, or to take a comprehensive look at some aspect of science, literature, history, or the fine arts.

In addition to the advanced placement program and the "300" courses, opportunities that stimulate the gifted student to work at her highest capacity include the "400" courses for high ranking seniors, established in 1933, and departmental honors work, initiated in 1926. Recognition of departmental honors is noted on the Commencement program, along with election to Phi Beta Kappa and other academic honors. A subcommittee of the faculty is continuing to explore further avenues to challenge the superior student with incentives to achieve her fullest potentialities.

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MARSHALL CLAGETT, chairman of the University of Wisconsin history of science department, who is on leave at the Institute for Advanced Study at Princeton University, has been appointed to the first permanent professorship in the new UW Institute for Research in the Humanities effective in September, 1959. ... University regents have accepted nine oil paintings by old masters of the 16th, 17th, and 18th centuries valued at around \$100,000 and presented by MARC B. ROJTMAN, of Milwaukee, president of the J. I. Case Co., Racine. ... The University of Wisconsin is ranked sixth among the nation's universities in grand-total enrollment and eighth in full-time enrollment in the annual compilation by RAYMOND WALTERS, president emeritus of the University of Cincinnati. The UW fall enrollment totaled 24,047 with 17,155 at Madison, 5,191 at Milwaukee, and 1,711 in the eight Extension Centers around the state. ... JULIAN E. MACK, UW professor of physics, has been appointed Science Officer at the U. S. Embassy in Stockholm, Sweden, for a year beginning Jan. 27, 1959. ... The Atomic Energy Commission has approved a \$150,000 grant to the UW to provide a nuclear reactor for a nuclear engineering program offering education in peaceful uses of atomic energy. ... The First Statewide Book Conference, held Nov. 1 on the University campus, attracted 300 persons. ... Development of a full program of humanistic studies centered on India will be supported by a \$46,750 grant from the Rockefeller Foundation, New York, to the UW for a four-year period beginning in 1959. ... An inspection team from the North Central Association of Colleges and Universities has praised the University's Integrated Liberal Studies Program, which has 420 students enrolled this year. It has been under the chairmanship of ROBERT E. POOLEY since its inception 10 years ago. ... The 24th annual Wisconsin Salon of Art at the Memorial Union main gallery brought \$1,200 in awards to 14 Wisconsin artists. ... Higher enrollments are reported in University foreign language studies

with the largest increase coming in study of Russian. ... University Medical School Alumni have launched a drive for an \$850,000 William S. Middleton Library Fund to replace facilities described 10 years ago as past "the critical stage of physical inadequacy." Dr. Middleton, for whom the library is named, has been an Academy member since 1936 and at present is Chief Medical Director of the Veterans Administration in Washington, D. C. Contributions to the fund have already gone over the \$185,000 mark. ... Academy member MENAHEM MANSOOR, chairman of the University department of Hebrew and Semitic studies, has been chosen one of seven scholars to compile a concordance for non-Biblical texts of the Dead Sea Scrolls. ... GEORGE P. WOOLLARD, head of the geophysics section of the University geology department, has been appointed to the Space Board of the National Academy of Sciences. ... HENRY A. POCHMANN, University professor of American literature, has won the \$600 second Loubat Prize for his two-volume work, "German Culture in America, 1600-1900." ... JAMES G. DICKSON of the plant pathology department and USDA agent, has been elected president of the American Institute of Biological Sciences, one of the nation's largest scientific organizations with 19 member societies. ... GEORGE URDANG, emeritus professor of pharmacy, has been elected corresponding member of the International Academy of History of Science.

A report, "School Buildings for Fond du Lac Today and Tomorrow," has been prepared by Academy member LE ROY J. PETERSON for the new UW program called cooperative Educational Research Services. ... PHILIP WHITFORD of UW-Milwaukee has been studying the prairies of Mississippi and PETER SALAMUN of the same school is continuing his studies on the distribution and habitat of the goldenrods and honeysuckles in Wisconsin. ... Creation of a separate Department of Anthropology has been announced by Chairman DAVID A. BAERREIS. ... HAROLD R. WOLFE, Dept. of Zoology, is one of the Directors of the summer Institute for College Teachers of Biology sponsored by the Amer. Society of Zoologists at the UW June 22-August 1. ... UW alumni are being asked to contribute to a fund which will be used to convert the old Washburn Observatory on the Madison Campus into an alumni house. ... A corporation to develop a 33-acre shopping center site in the University Hill Farm is expected to yield annual support to studies in the social sciences and humanities equivalent to a \$10 million endowment.

Plans for the acquisition of Milwaukee-Downer Seminary lands for addition to the UW-Milwaukee campus were outlined recently. ... JOHN W. STAUFFER, Dept. of Botany, will be in charge of a summer institute at Madison for teachers of high school biology as part of the program to boost the quality of science instruction. ... WILLIAM B. SARLES, UW Bacteriology Dept., is serving as Carnegie Professor of Bacteriology at the University of Hawaii this semester. ... LOUIS KAPLAN, Director of UW Libraries, recently secured a gift from the Kellogg Public Library of Green Bay of the 1,000 volume theological library known as the "Chwalibog Collection."

Final plans and specifications have been authorized for the new Science building on the UW-Milwaukee campus costing over \$2 million. ... Second semester enrollment on all UW campuses will total about 22,700 students, which is some 1,300 over enrollment the same time last year. ... Funds earmarked for faculty salary adjustments account for more than half of the \$13 million increase in state appropriations which the UW is requesting for the 1959-61 biennium, totaling approximately \$55 million. This would be matched by a similar amount from other sources.

Recent honors and awards for UW Academy members include: EDWARD BEALS has received an award from the Chapman Memorial Fund of the Amer. Museum of Natural History for ornithological research on "The ecology of the birds of the Apostle Islands." ... GARY SCHULZ of the Photo Lab won second place in American College Public Relations Assn. competition. ... I. O. HEMBRE, Executive Secretary of the Wis. Soil Conservation Committee, received one of the first president's citations of the Soil Conservation Society of America. ... AARON BOHRD will have a new exhibition of paintings in the Main Gallery of the UW Memorial Union February 4 to March 2. ... WARREN L. WITTRY, Curator of Anthropology, State Historical Society, was made a Fellow of the American Anthropological Assn.

New positions for UW professors include: G. A. ROHLICH is chairman of a committee studying "The University of the Future." ... IRA L. BALDWIN was appointed chairman of the Army Chemical Corps Advisory Council. ... FARRINGTON DANIELS is on the Board of Sponsors of the "Bulletin of the Atomic Scientists." ... ROBERT A. McCABE was elected to the University's Library Committee. ... A. W. SCHORGER is on the committee to administer the new "Stewart's Woods" Madison School Forest. ... Dr. HANS H. REESE recently accepted an invitation from the Federal Republic of Germany to take a special study tour of German Universities including West Berlin. ... JOHN EMLEN is on leave this semester for a study in the Belgian Congo of the great apes of Africa.

At the UW Racine Extension Center, JOHN VOZZA (chemistry) and ROBERT ESSER (biology) participated in a meeting of the teaching staff of the St. Luke's Hospital School of Nursing for the purpose of coordinating and evaluating the academic instruction received by the student nurses at the Racine Center and that presented by the medical staff at the hospital. ... Local plans to erect new Extension center buildings at Kenosha and in the Fox River Valley are developing successfully. ... From the Racine Extension Center comes word that EDWARD TAUBE presented a lecture on the geography and physiology of Racine in a series of lectures on "Highlights of the History of Racine" and RICHARD HULTMAN, instructor in botany and zoology, has been doing graduate work at Madison recently.



The following information is from the Marquette University News Bureau and Professor SCOTT L. KITTSLEY, Review reporter: VICTOR HICKS, chief physicist of the Allen Bradley Company of Milwaukee, has been appointed a research physics professor. ... The Atomic Energy Commission has allotted a \$15,500 grant to the Engineering College to support the recently enlarged program in nuclear science. ... THOMAS GLASS is director of the new M.U. Computing Center in the College of Engineering. Classes in programming for their I.B.M. 650 computing machine are offered. ... SCOTT L. KITTSLEY, Pres. of the Sigma Xi Milwaukee group, has reported that a new chapter is being established at Marquette University for this national honorary scientific fraternity devoted to research. ... JOSEPH SCHWARTZ of the English Department recently discussed the Fourth Renaissance of Drama with members of the MU Fine Arts Guild. ... NICK J. TOPETZES, Dept. of Education, lectured on "Testing and Grading" before the dental hygiene faculty last month.

RUDOLPH E. MORRIS, chairman of the Sociology Department, has been appointed by Mayor Zeidler to the Milwaukee Commission on Human Rights. ... JOHN P. BRADISH, acting chairman of mechanical engineering, has been awarded a National Science Foundation

fellowship for doctoral study at the UW. ... Forty-five freshmen have accepted the University's invitation to enter a superior student program at the start of the February semester. The program, introduced in the College of Liberal Arts, will offer individualized curricula, increased faculty guidance, accelerated programs, directed reading, lectures and discussion groups. ... Conversational Arabic will be added to Marquette's non-credit language courses this spring in the Adult Education program. The instructor is a medical technology student from Jordan, KAMEL MOGHRABI. ... A photomicrograph of copper sulfate and calcium crystals, the work of LEO C. MASSOPUST, Sr., is being exhibited at the Museum of Modern Art in New York. ... JAMES G. HILTON has been appointed associate professor of pharmacology at M.U. Medical School. He comes to Marquette from the University of Mississippi Medical Center.



"CARROLL - Wisconsin's Pioneer College" is the title of a feature article by Academy member NEITA OVIATT FRIEND in the Winter 1958 issue of Creative Wisconsin, published by the Wisconsin Regional Writers Association. In a 20-page review of the history of this private college at Waukesha, she begins with a photo of President ROBERT DENHAM STEELE and concludes with information on the results of his effective leadership in recent years. According to her thorough report, Carroll College has an enrollment of 789 students at present, a faculty of 60, and courses for a fully accredited Liberal Arts College. Academy member Steele also is President of the Wisconsin Foundation of Independent Colleges, Inc. Business and industry contributed \$218,435 to this group of 16 liberal arts colleges during the first nine months of the fiscal year ending last December 31. This is an increase of about \$28,000 over the same previous period.



One of the main news items from the Wisconsin State Colleges is the search for a new President for the "largest and fastest growing state college"--at Oshkosh to replace FORREST R. POLK, who will retire at the end of this June. ... On last November 13 the Regents of the Wisconsin State Colleges approved procedures for merging the Wisconsin Institute of Technology and the State College at Platteville effective July 1, 1959 under the new name, "Wisconsin Institute of Technology and Platteville State College." ... Each of the 10 Wisconsin State Colleges has applied to the U. S. Office of Education for authority to give loans under the new federal loan program by which the college contributes 1/10th of every \$1,000 loan. It is expected the average loan will be about \$600 a year. ... A survey of 809 legislative scholarship winners this year revealed that two-thirds of the freshman students come from a farm or small town and plan to be teachers. ... Last October Wisconsin State College-River Falls conducted a Rural Life Conference with Secretary of Agriculture EZRA TAFT BENSON as feature speaker. ... Wis.State College-Platteville will take an active part in a study of Grant County resources in cooperation with the county's Industrial Development Committee. ... The State College Board of Regents is asking for a \$21,543,050 budget for 1959-61 biennium. ... A new low cost method of recovering nearly 100% of the residue in metallic ores has been developed at Wisconsin State College-Platteville by Dr. FRANCIS CAREY of Waupaca with assistance from Platteville Chemistry Professor WILLIAM NIKOLAI. ... New majors have been approved by the Coordinating Committee for Higher Education for training of teachers in business education at Eau Claire, Stevens Point, and Superior, physical education for women at Oshkosh, and handicapped children at Eau Claire.



Beloit College Professor E. E. LeMASTERS has been elected to a three year term on the board of the Wisconsin Welfare Council along with Dean MARK H. INGRAHAM of the UW. ... A collection of 600 books and 300 magazines dealing with former President FRANKLIN D. ROOSEVELT has been given to the Beloit College library by Dr. JOSEPH C. RHEINGOLD. ... Beloit College and Beloit hospital have announced a new coordinated program in medical technology with a fourth year of study in the hospital laboratories under the direction of Dr. EARL W. CAULDWELL, laboratory Director.

Three Wisconsin private colleges--Beloit, Lawrence and Ripon--recently joined with seven others in four states forming the Associated Colleges of the Midwest to co-operate on education programs and develop additional revenues. Presidents MILLER UPTON (Beloit) DOUGLAS M. KNIGHT (Lawrence) and FRED O. PINKHAM (Ripon) are on the Board of Directors. The Ford Foundation contributed \$525,000 this January to finance the association the first five years in a "matching funds" program which plans to make joint studies and experiments in education and develop additional revenues.



Wisconsin's Coordinating Committee for Higher Education reported to Governor GAYLORD NELSON last December on the present status and possible future needs for higher education in Wisconsin. In return, he asked them to make an extensive study of public higher education costs to be expected in the state over the next decade. ... The C.C.H.E. reported building projects with an estimated total of \$88,237,800 will be needed to expand Wisconsin State Colleges and University of Wisconsin facilities by 1963 and more than \$105 million more between 1963 and 1973. This is based on the expectation that the present 38,000 day students would increase 21,000 by 1963 and another 22,000 by 1973. Building needs by 1963 showed about \$54 million for UW at Madison, \$13½ million for UW-Milwaukee and \$34 million for the state colleges. ... Present enrollment of all Wisconsin colleges and Universities was reported to be at an all time high with 60,230 day students--an increase of 8% over last year. ... The Coordinating Committee's Dec. 1958 bi-annual report to the Governor (available free by writing to C.C.H.E. at 7th Floor, State Office Bldg., Madison 2), has many charts projecting expected college growth up to 1973 as well as explanatory charts, graphs and statistics.



Milton College recently announced plans for a five year, half-million dollar building program based on an anticipated 50% increase in enrollment in that period. Included would be a woman's dormitory, "Deland Memorial," fine arts unit and a gymnasium-athletic center. ... The Milton College Bulletin for January 1959 is a new and attractive booklet which is being sent to prospective students. It bears out the recent comments by DANIEL PARKER, Chairman of the Board of Trustees, that "Milton College has sufficient support in this community to continue to operate as a privately supported liberal arts college."

Miscellaneous Colleges

A new book about Lawrence College entitled "Creation of a Campus" was written by MARGUERITE ELLEN SCHUMANN and published by the Lawrence College Press. ... The \$1,400,000 music-drama center being built on the Lawrence College campus will contain a theater, recital hall, library and classrooms each named for an individual impor-

tant to the college's success. ... Two students from Lawrence, DENNIS R. ODEKIRK and DAVID C. MULFORD, have been awarded Rotary Foundation fellowships for advanced study in Europe during the 1959-60 school year.

Edgewood College at Madison has been fully accredited by the North Central Association of Colleges and Secondary Schools. ... SISTER M. ELAINE, O.P., head of Edgewood College's Biology Dept., recently received a National Science Foundation faculty fellowship to enable her to complete her doctoral work at the UW where she is majoring in endocrinology. ... SISTER M. CELESTE, O.P., Director of Dominican College in Racine, reports that SISTER M. MONICA, O.P., has sculptured a statue of Christ the Teacher which is on display at the Sacred Heart School there.

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HONORS, AWARDS and NEW POSITIONS

The following are honors, awards and new positions of Academy members in addition to those reported elsewhere: The Wisconsin Chapter, Soil Conservation Society of America, recently presented honorary award certificates to LEWIS FRENCH (Milwaukee), HAROLD KRUSE (Loganville), M. N. TAYLOR (Merrill), and M. F. SCHWEERS (Madison) for their outstanding contributions in this field. ... At the 10th annual Engineers' Day dinner on the UW campus, HARRY C. BROCKEL, Milwaukee's municipal port director, was given a distinguished service citation. ... The Outdoor Writers Assn. of America recently named DION HENDERSON, of the Milwaukee Associated Press Bureau, one of the three top outdoor writers in the nation. ... DAVID A. WALKER of Baraboo is studying Conservation Education at the U. Michigan with the assistance of a \$1,000 National Wildlife Federation award. ... HARLEY T. McKEAGUE of Rhinelander received commendation for 28 years of service as a Conservation Warden in a Conservation Commission retirement resolution. ... Miss MARY A. DOHERTY, a teacher at Mary D. Bradford H.S. in Kenosha, was honored last year at the 10th annual meeting of the Junior Academy of Sciences at Kenosha. ... A new book by GRANT MANSON features as Academy honorary member with the title: "Frank Lloyd Wright: The First Golden Age" (Reinhold \$10.00).

DON ANDERSON, publisher of Madison's Wisconsin State Journal, is a member of the federal laws committee of the Am. Newspaper Publishers Assn. ... ALBERT M. FULLER, C. M. GOETHE, and HERBERT W. LEVI are members of the Board of Governors of the national Nature Conservancy. ... WALTER W. ENGELKE is President of the Madison Audubon Society and also a regional Vice-president of the United World Federalists. ... MURL DEUSING (Milwaukee) has been named Director of the St. Louis (Missouri) Academy of Science. ... Asst. Attorney General ROY G. TULANE has been appointed to the Committee on Uses of International Rivers (Section on International and Comparative Law) for the Am. Bar Assn. ... Miss S. JANICE KEE, Secretary of the Free Library Commission and Editor of the Wis. Library Bulletin is President of the Am. Assn. of Libraries (Div. of Am. Library Assn.) and on the Council of Am. Library Assn. ... New Chairman of the Conservation Commission Forest Pest Control Comm. is State Entomologist E. L. CHAMBERS. ... RICHARD HEMP has been re-elected President of the Wis. Federation of Conservation Clubs. ... HAROLD C. BRADLEY (Berkeley, Calif.) is President of the Sierra Club, one of the nation's outstanding conservation organizations. ... HARRY C. BROCKEL is a member of the Board of Trustees for Wisconsin's new Marine Historical Society, Inc. ... Professor LOYAL DURAND now is back at his U. Tennessee teaching position after a year as visiting professor in economic geography at the U. Hawaii. # # #

NEW MEMBERS

Active:

HAROLD W. BANNENBERG, Menomonee Falls
 THOMAS E. BERG, Madison
 Mrs. AGNES G. BODENSTEIN, Madison
 STEPHAN F. de BORHEGYI, Milwaukee
 WM. M. CHESTER, Jr., Milwaukee
 W. T. COMSTOCK, Portage
 JOHN F. DAVID, Green Bay
 LAUREL A. DAVISON, Washington Is.
 DOROTHY FEIR, Madison
 Z. FOLBEJWSKI, Madison
 JOHN M. GATES, Madison
 I. EDWARD GOLD, Chippewa Falls
 JAMES M. HELM, Woodruff
 MONROE F. HEUER, Milwaukee
 HANS G. HORNE, Chippewa Falls
 RICHARD WM. HORTON, Oshkosh
 OTTO F. HUETTNER, Sheboygan
 MABEL L. JENSEMA, Ripon
 WALLACE G. JOHNSON, Glenwood City
 VINCENT W. KALVIN, Milwaukee
 VICTOR H. LANNING, Madison

JAMES A. MCGURN, West Allis
 C. H. MARTIN, Milwaukee
 RONALD D. MELVILLE, Madison
 GERMAINE MERCIER, Madison
 DELBERT E. MEYER, Naperville, Ill.
 ROBERT NAJEM, Wausau
 NEAL C. PRECOURT, Appleton
 JOHN W. RYAN, Madison
 RICHARD S. SARTZ, La Crosse
 GERHARD R. SCHULZ, Madison
 WALTER A. SCHUMANN, Menomonee Falls
 CLARENCE SILBERSACK, Sheboygan
 SISTER MARY NONA, C.P., Madison
 MARGARET SMITH, Madison
 B. V. STALLARD, Wauwatosa
 DONALD R. THOMPSON, Madison
 EDITH S. TREUENFELS, Stevens Pt.
 PAUL L. WILEY, Madison
 JOHN E. WILLARD, Madison
 ROBERT G. WISSINK, Whitewater
 C. R. WOLF, Berlin
 GEORGE A. CURRAN, Hayward

Family:

Mr. and Mrs. ROYAL B. EVERILL, Beloit
 Mr. and Mrs. CARL G. HAYSEN, Jr., Hartland
 Mr. and Mrs. WILLIS LEENHOUTS, Milwaukee
 Mr. and Mrs. FRED A. PAEGELOW, Hartford
 Mr. and Mrs. DONALD VOSKUIL, Muskego

Library:

ARROWHEAD HIGH SCHOOL, Hartland	1'UNIVERSITE OFFICIELLE DU
COLEMAN HIGH SCHOOL, Coleman	CONGO BELGE et DU RUANDA-
JEFFERSON ELEMENTARY SCHOOL, Oshkosh	URUNDI, Elisabethville
NEW RICHMOND H.S., New Richmond	WHITE LIBRARY, KANSAS STATE
WISCONSIN STATE COLLEGE, Oshkosh	TEACHERS COLLEGE, Emporia

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Letters: Haskell M. Block, Univ. of Wis., Madison

LIBRARIAN: Walter E. Scott, Madison

SECRETARY-TREASURER: Roger E. Schwenn, Univ. of Wis., Madison

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 Otto L. Kowalke, W. C. McKern, E. L. Bolender, Katherine G.
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Membership: Harold A. Goder, Chairman, Berenice Cooper, Otto L.
 Kowalke, Fred Kaufmann, John F. Voza, and Frederick W. Hainer

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EXCHANGE LIBRARIAN: Miss Laurel Nelson, Memorial Library, UW

"DRIFTLESS AREA", WISCONSIN

MAP
PREPARED BY
Francis D. HOLE
1958

LEGEND (BY COUNTIES)

ADAMS 1. ROCHE A CRI
ROADSIDE STATE PARK

BUFFALO 1. BIG SWAMP

CRAWFORD 1. VILLA LOUIS AT
PRAIRIE DU CHIEN
2. KIOKAPOO APPLE ORCHARDS

DANE 1. LAKE MARION 2. MAZOMANIE
MARSH 3. BLACK EARTH CREEK
4. SALMO POND 5. NEW OBSERVA-
TORY WOODS

GRANT 1. WYALUSING STATE PARK AND
2. WILDERNESS AREA 3. NELSON
DEWEY STATE PARK 4. DEWEY HTS.
PRAIRIE 5. MILITARY RIDGE
6. SINSINAWA MOUND 7. PLATTEVILLE

GREEN 1. BROWNTOWN MARSH & 2. OAK FOR.
3. NEW GLARUS WOODS ROADSIDE PARK

IOWA 1. TOWER HILL STATE PARK AND
2. TALIESIN 3. GOV. DODGE STATE PARK
& 4. PINE CLIFF 5. LOST R. CAVE
6. BLUE MOUNDS 7. CAVE OF THE MOUNDS

JACKSON 1. CASTLE MD. STATE PARK 2. WETLANDS
3. CENTRAL WIS. CONSERVATION AREA

JUNEAU 1. CENT. WIS. CONSERV. AREA 2. NECKEDAR
REFUGE 3. JACK OAK NATURAL AREA
4. ROCKY ARBOR ROADSIDE STATE PARK

LACROSSE 1. VAN LOON SWAMP 2. MIDWAY PRAIRIE
3. SOIL EROSION EXPER. STATION

LAFAYETTE 1. FIRST CAPITOL STATE PARK
2. YELLOWSTONE LAKE

MARATHON 1. RIB MOUNTAIN STATE PARK

MONROE 1. LACROSSE R. CONSERV. AREA
2. G. WIS. CONS. AREA 3. MILL BLUFF PARK

RICHLAND
1. EAGLE CAVE
2. ROCKBRIDGE

SAUK 1. BAKKENS
POND 2. REEDS-
BURG MARSH
3. DELL CREEK
4. DEVIL'S LAKE

TREMPEALEAU
1. PERROT ST. PARK
2. TREMP. LAKES
3. BRADY'S
BLUFF PRAIR.

VERNON
1. COON VALLEY
2. 3. CHIMNEYS
3. WILD CAT MT.
4. MT. PISGAH FOR.
WAUSHARA
1. BIG ROCHE A CRI
2. HANCOCK AG. EXP. STA.

