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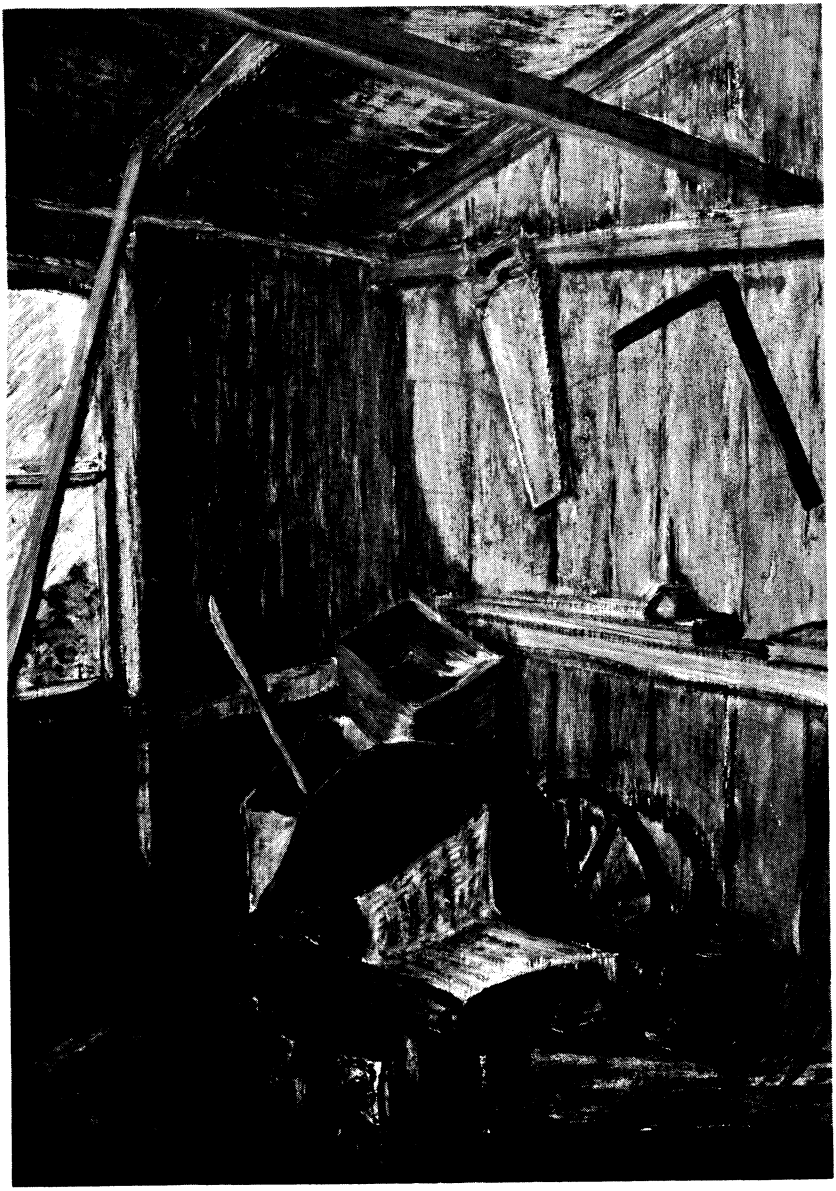
WISCONSIN ACADEMY REVIEW

WINTER, 1956



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WISCONSIN ACADEMY REVIEW

Vol. 3 Winter, 1956 No. 1

CONTENTS

WISCONSIN ACADEMY REVIEW

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BE SURE TO MARK YOUR CALENDAR FOR MAY 4 & 5, 1956 —
86th ANNUAL ACADEMY MEETING AT MARQUETTE UNIVERSITY, MILWAUKEE

WISCONSIN'S FUTURE POPULATION

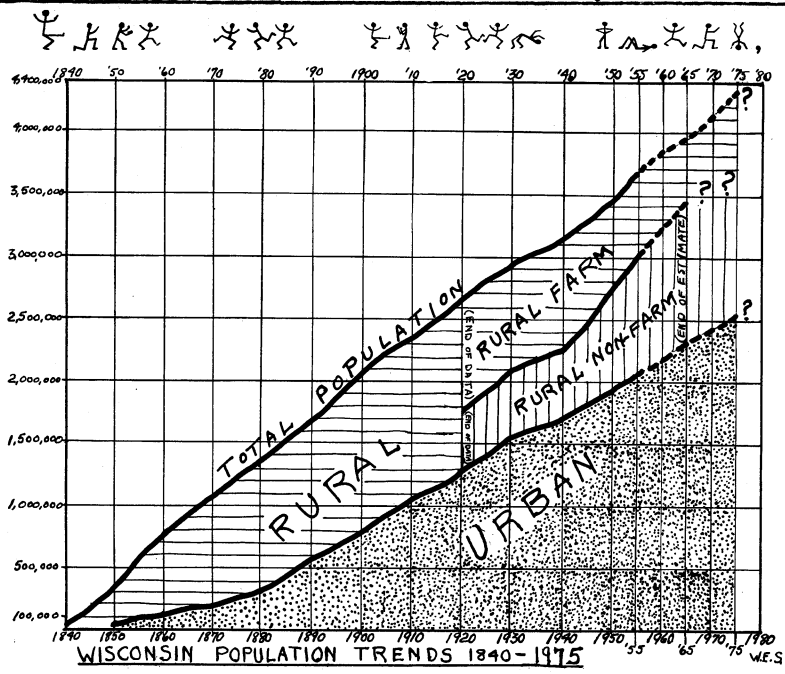
By Allan Orman and Douglas Marshall
Department of Rural Sociology, UW

The number of people who will populate an area such as Wisconsin or the nation in the future represent valuable information, not only for research but also for long time planning. To meet this need for estimates of future population, various measures have been devised. The common principles underlying most of these measures are the beliefs that population changes normally occur slowly and with some regularity. To obtain numerical estimates from the application of these principles, specific hypotheses and assumptions have to be made describing the nature and rates of change. These assumptions take into consideration the past record of changes for an area, the preciseness desired for the estimate, the order of the area concerned (county, state, nation), and the predilections of the researcher concerning population change. Three basic factors taken into consideration in making such estimates are fertility, mortality, and migration.

It is common practice in projecting population figures to cast them within a framework of some combination of three assumptions as to fertility (high, medium, low), three as to mortality (high, medium, low), and two as to migration (none or a given number).

Currently, future fertility presents the major area of uncertainty. This is reflected in the United States Census reports which make three series of projections with respect to expected fertility (rising, stable, and decreasing). Mortality, barring (1) major advances curtailing the three big killers (heart disease, cancer, and intracranial lesions), (2) catastrophes, and (3)war, appears to have become relatively stabilized. Migration also represents a fairly constant figure over a given span of years.

Utilizing census data, one approach to the projection of future population is that of describing population change by fitting a curve to the observed size of population for a known period and then extending that



WISCONSIN POPULATION TRENDS 1840-1975

curve, algebraically formulated, by extrapolation to obtain the corresponding population size for given dates outside the range of observed dates. Theoretical and expedient considerations govern the selection of the form of algebraic equation utilized to describe changes in population size.

Proceeding from recent estimates of the state population issued by the United States Census Bureau* (arrived at by a migration-and-natural-increase method--employing fertility, mortality and migration estimates), it is possible for the investigator to choose a curve which he thinks is expediently and theoretically justified and to project future estimates of population. The reader must recognize that the preciseness of the projection is not only influenced by the assumptions and hypotheses governing primarily fertility at the present time, but also by the size of the population area (nation, state, county), the span of the projection (1960, 1970, 1975), and the breakdown of the projected population (age, residence, rate). For example, less preciseness would be expected in the projection or more latitude

* - Current Population Reports, Series p-25, No. 125, November 8,1955, Bureau of the Census, Washington 25,D.C.

should be allowed if one sets a twenty-year projection for a state by three residence categories in contrast to the nation for 10 years without a breakdown by residence. At any rate, anyone is taking a calculated risk in making any population projection that purports to have reasonable preciseness! The table below gives a consolidation of the projections employed here without going into the assumptions, hypotheses, and particular methodology employed.

In brief, the conclusions are as follows:

1. In the next 20 years Wisconsin's population will increase by 612,000 or nearly 17 per cent.

2. The urban population will increase by 468,000 or over 22 per cent between 1955 and 1975. Over three-fourths of the increase in Wisconsin's population in the next 20 years will be in the urban.

3. The rural population will increase by 144,000 during the next 20 years, approximately 9 per cent.

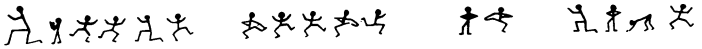
4. The rural nonfarm population in Wisconsin will show the greatest proportional growth-- 222,000 or nearly **24 per cent in the next 10 years.**

Population of Wisconsin, By Residence, 1940-1975*

Year	Total	Urban	Rural	Rural Nonfarm	Rural Farm
1940	3,137,587	1,679,144	1,458,443	586,254	872,189
1950	3,434,575	1,906,363	1,528,212	802,337	725,875
1955	3,691,000	2,081,000	1,610,000	938,000	672,000
1960	3,844,000	2,198,000	1,646,000	1,049,000	597,000
1965	3,997,000	2,315,000	1,682,000	1,160,000	522,000
1970	4,150,000	2,432,000	1,718,000	**	**
1975	4,303,000	2,549,000	1,754,000	**	**

* Using straight line projections adjusted on the basis of Bureau of Census estimate July 1, 1955. See Current Population Reports, Series P.25, No. 125, Bureau of the Census, U. S. Dept. of Commerce.

** Straight line projections for a declining population such as farm would theoretically be sound but practically unrealistic since the end product would be zero. It is difficult to foresee or predict changes in the farm population and by implication in the rural nonfarm beyond 1965.



5. In contrast, Wisconsin's farm population will lose 150,000--a loss of over 22 per cent in the next 10 years.

6. In 1965, 57.9 per cent of Wisconsin's population will be urban in contrast to 56.4 per cent in 1955. The rural nonfarm population will change from 25.4 per cent in 1955 to 29.0 per cent in 1965. The farm population will drop from 18.2 per cent in 1955 to 13.1 per cent in 1965.

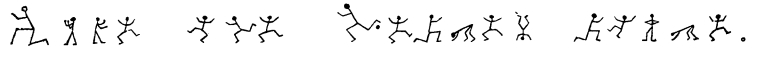
Thus, it may be seen that Wisconsin's growth during the next decade will be a disproportionate percentage-wise increase, with the greatest gains occurring in the nonfarm population, a slight gain in the urban areas, and a sizable loss in the farm population.

- - -

Editor's Note: A new bulletin by Professor Douglas G. Marshall entitled, "Wisconsin's Population - Changes and Prospects," will be available about February 1, 1956 from the Wisconsin Experiment Station, U.W. College of Agriculture, Madison, 6. (The graph with this article was prepared by the Editor).

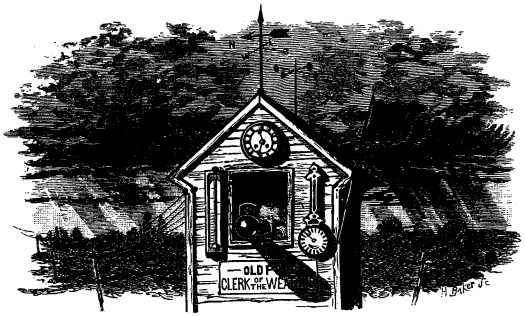
The Language of the Restless Imps

Helping to illustrate this population article are eight rows of human figures in 26 different positions representing each letter of the alphabet. This is "the language of the restless imps," in two well-known four line verses in English as published in St. Nicholas Magazine for May, 1874. To those who may wish to decipher this riddle before the verses are published in the next issue, these clues are given: P and C invariably lie on their backs with their heads in different directions and E is dancing with hands in the air.



"PRIDE IN THE UNIVERSITY OF WISCONSIN is the inalienable possession of those who dwell within Wisconsin's borders. Nevertheless, it is shared by every American who honors scholarship, citizenship, the untiring quest for truth, the will to excel in all things human."

--Dwight D. Eisenhower



COLD AIR AND WISCONSIN WINTERS

By Reid A. Bryson
Department of Meteorology, UW

There is no getting around it, Wisconsin winters are cold! They are colder than many other places on earth at the same latitude, so we cannot simply accuse our distance from the equator as the culprit. However, we can explain the frequency of cold days in Wisconsin winters by considering where we are located with respect to air mass sources.

When the meteorologist speaks of air masses, he is referring to a body of air of large extent (perhaps a thousand miles across) which has relatively uniform properties. Of particular interest in Wisconsin are the air masses, which originate over the snow-covered surface of Arctic Canada, over the cold waters of the North Pacific, and over the warm Gulf of Mexico, Caribbean and tropical Atlantic. This last warm mass affects Wisconsin winters primarily in that it is the source of the moisture which brings our winter snow. In doing this, it appears only far above the surface of the state and so doesn't help out our winter temperatures very much.

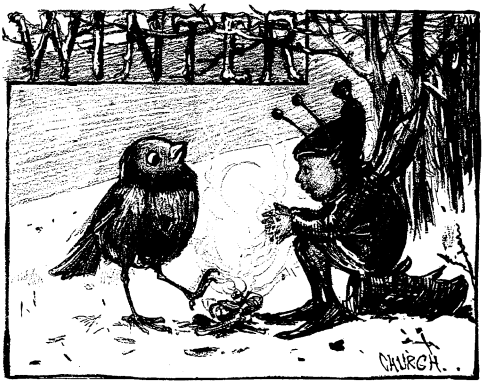
The two major sources of the air which streams across Wisconsin in winter are the Pacific area and Canada. Ordinarily we blame the Canadians for sending our winter air down here to get rid of it, but recent studies have shown that this out-pouring of Canadian air is most frequently only from about mid-February until the end of March, after it has ceased to be quite as cold as in January. During December, January and the first part of February, the chilly air from the Pacific crosses the western mountains, then moves eastward across the southern Canadian provinces, the Dakotas and Minnesota to arrive here quite a few degrees warmer than the air that occasionally slips down from Canada. Rather frequently Pacific or Canadian air, after passing the state the first time will loop down into the southern United States, and then return along the Mississippi valley to give us breaks of somewhat warmer weather.

During the time that we are under the influence of Pacific air, the boundary between that air and the frigid

Canadian mass is not far to the north. It frequently slips down over the northern part of the state without reaching the southern part of the state. On the other hand, the warmer air mass that has looped over the southeastern states to return in warmer modified form frequently enters southern Wisconsin without reaching the northern part of the state. These two circumstances are more responsible for the different winter climates of northern and southern Wisconsin than differences in the temperature of the individual air types as they cross the state. This may be illustrated by referring to the table.

If we look at the frequency of occurrence of very cold air (that is, with the highest temperature still below 0°F) we find that it is more common at Spooner, in the northern part of the state than at Hancock or Madison, in the southern part of the state. These low temperatures are characteristic of the frigid Canadian air. On the other hand, air which has passed over the southeastern states and returned in modified condition is more frequent at Madison and at Hancock than at Spooner, as shown by the occurrence of maximum temperatures that exceed 47°F during the day and by frequency of minimum temperatures which do not get as low as freezing during the night. To get back to our original statement about Wisconsin being cold, look at the figures for days which do not get as warm as 32°F. The table shows a considerable difference across the state from south to north but certainly a preponderance of the days are definitely cold.

We here in southern Wisconsin can be glad that the Canadian air stops as frequently as it does in the mid-part of the state, for a quick calculation from the table will show that Spooner has those real cold ones which get below -20° during the night almost 15 times as frequently as Madison. On the other hand, this difference in the frequency of occurrence of the colder air masses gives the northern part of the state more cool air in summer. That this is so is borne out not only by the climatologist's figures, but also by the number of vacationers that take advantage of the summer weather there. I do.



(Table appears on p.7)

WINTER EXTREME TEMPERATURE FREQUENCIES in NORTHERN (Spooner), CENTRAL (Hancock), & SOUTHERN (Madison) WISCONSIN

	Maximum Temperatures				Minimum Temperatures			
						-20°F		
31°F & lower	Dec.	Jan.	Feb.	Ave.	Dec.	Jan.	Feb.	Ave.
Spooner	64.7	77.5	69.4	70.5	5.5	14.0	11.0	10.2
Hancock	58.1	69.1	61.1	62.8	2.7	7.9	6.1	5.6
Madison	41.9	62.0	57.4	53.8	0.1	1.5	0.6	0.7
0°F & lower						above 32°F		
Spooner	3.4	7.4	2.9	4.6	3.7	0.7	1.2	1.9
Hancock	0.6	4.0	1.8	2.1	4.6	2.0	2.9	3.2
Madison	0.8	3.5	1.5	1.9	10.1	4.8	5.3	6.7
48°F & higher								
Spooner	1.2	0.5	2.2	1.3				
Hancock	3.9	0.7	1.8	2.1				
Madison	5.4	2.1	2.8	3.4				

(Figures show per cent of all days.)

# # #

AAAS RESEARCH GRANT

We have been informed that the AAAS Research Grant-in-aid for 1955 will be $88.00. Applications for this grant should be submitted to the Secretary as soon as possible. These applications will then be reviewed by the Council and awarded by them. All voting members of the Academy are eligible for this grant. Please submit a statement which will set forth the title and purpose of the research work contemplated. These funds may be used to augment a research study now underway.

Following the 1955 grant, all future AAAS research grants will be awarded only to high school students or others who are not senior members of the Academy.

THE FAMOUS BONE WHISTLE from the Oconto site, (see Fall 1954 issue) identified in the report as deer bone, turns out to be from the wing bone of a trumpeter swan as confirmed by men at Smithsonian and Chicago Museum of Natural History.

# # #

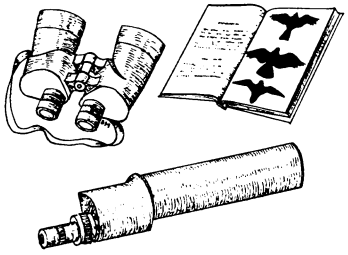
THE WISCONSIN SOCIETY FOR ORNITHOLOGY

By Helen Northup, Secretary
Madison

It was in May, 1939, that a group of enthusiastic ornithologists and bird students met in Madison and organized the Wisconsin Society for Ornithology. The constitution that was approved that day stated that the "purpose of the Society shall be to stimulate interest in and to promote the study of birds of Wisconsin, especially in the field, and to bring together and permanently record accurate and authentic data relative thereto." There were 123 charter members. Just three years later the Society was officially incorporated under the laws of Wisconsin.

A publication called The Passenger Pigeon, which had been started by the Madison Bird Club as a means of stimulating interest in a state-wide society, has been the outstanding achievement of the Society. Issued at first as a mimeographed monthly magazine, it became a quarterly in 1942. It has contained many valuable features, especially the field notes and reports of the Christmas and May censuses. Outstanding series have been contributed by H.H.T. Jackson, August Derleth, Carl H. Richter and A. W. Schorger.

Another publication of the Society was Wisconsin Birds - a Preliminary Checklist with Migration Charts. In May, 1947, the Society dedicated a beautiful bronze plaque to the passenger pigeon in Wyalusing State Park. In connection with this event, the Society issued a publication called Silent Wings - a Memorial to the Passenger Pigeon, edited by Walter E. Scott, and containing articles by Aldo Leopold, A. W. Schorger and H.H.T. Jackson. In 1948 the Society issued a card field checklist. The Birds of Wisconsin by L. Kumlien and N. Hollister, which had been originally published in 1903, was issued with revisions by A. W. Schorger in 1951.



Sixteen conventions have been held in the spring, with attendance ranging from 80 at that first meeting in Madison in 1939 to 354 in 1949, when the Society met with the Wilson Ornithological Club. At that time the meeting was the

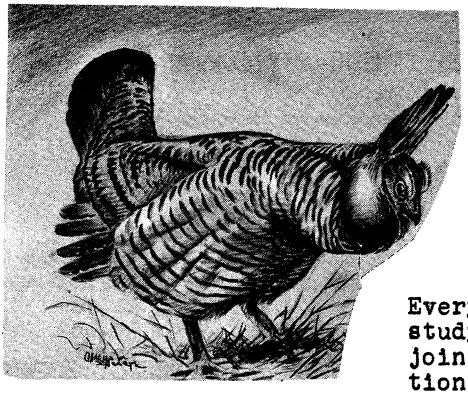
Bird Students at Cedar Grove

largest ornithological gathering ever held in the United States. These meetings have interesting programs of talks, movies, field trips and a banquet. A well-stocked Supply Department is on hand at these meetings with books, pamphlets, pictures, bird records, binoculars, bird houses and feeders; in short, everything imaginable of interest to bird watchers.

The interest in field trips has increased enormously in recent years, with the result that the membership gathers fairly often during the year to observe birds together. In late winter the Milwaukee waterfront is visited; in April many members observe the prairie chickens on their booming grounds near Plainfield; in June a two-day campout has become popular; in September the members meet at Cedar Grove on Lake Michigan to watch the hawk migration. Other field trips are being added to the year's program.

The Society has an Endowment Fund "to further the purpose of ornithology in Wisconsin." Also it has at present a fairly large fund, recently collected from the members and other interested persons, for buying land in the prairie chicken country in central Wisconsin, to expand the booming grounds of these interesting birds. The conversion of prairie to farming purposes in that area has seriously threatened the continuance of the prairie chicken in Wisconsin.

A Board of Directors consists of eleven members, including the five officers--president, vice-president, secretary, treasurer and editor, elected for one year



at the annual meeting--and six directors-at-large, elected for two-year terms. Meetings of the Board are held three or four times a year.

Today there are 631 members in the Wisconsin Society for Ornithology. Everyone interested in bird study is cordially invited to join the Society. Applications for membership may be sent to Carl P. Frister, 2956A N. 38th St., Milwaukee 10. Dues for active members are $2, or $1.50 for student members, which includes a subscription to The Passenger Pigeon.

# # #

AN HISTORICAL COTTONWOOD TREE

It isn't often that a cottonwood tree becomes of interest other than its ability to grow rapidly, producing abundant shade. Those of you who have lived in Madison for more than 30 years may remember the gigantic cottonwood tree that grew in front of the University High School on University avenue. Those who knew that tree probably never heard of the entomological interest it had for Professor A. C. Burrill between the years of 1911 to 1915. Burrill was a naturalist and was intrigued by the large nest of carpenter ants that had made their home in the heart of this ancient cottonwood. He carefully wrapped yards of cheesecloth around the trunk and over the entrance to the ant's nest to capture any insects that might live in it.

One day he noticed a very small black fly crawling out of the entrance to the nest. It had exceptionally short wings, so short that the insect was unable to fly. He captured it and carefully mounted it, sending it away to Dr. A. L. Melander, for determination. It was found to be an unknown species of Scatopsidae and Melander gave it a new generic name called Coboldia. He named the species formicarum since it was found to live in a populous ant nest. Melander published his work as a Bulletin of the Washington Agricultural Experiment Station in 1916.

--- C. L. Fluke

LIVING MUSEUMS OF PRIMEVAL WISCONSIN

By Albert M. Fuller, Chairman
State Board for the Preservation of Scientific Areas

Wisconsin, like many other states, has had many natural habitats destroyed or modified since the days of the pioneer settlers. Woodlands have practically disappeared in many of our southern counties. Our prairie areas are nearly extinct. Many of our bogs and marshes have been drained. New uses have been found for other submarginal lands. Fence-row thickets have been replaced by electric fences. Most of the native vegetation along our roadsides has been destroyed. Pollution has made many of our streams unfit for native plants and animals. The rapid expansion of our cities is modifying or changing land use in many portions of the state. The present course of land use without a definite habitat preservation program would in several decades find all but the northern part of Wisconsin destitute of primitive areas.

John Muir, nearly a century ago, saw the need for refuge areas for plants and animals. The late Aldo Leopold saw that same need and in 1945 as a member of the Wisconsin Conservation Commission was instrumental in having the Commission set up a Natural Areas Committee. The late Norman C. Fassett of the University was chairman of that committee. By 1950 it was apparent that a new set-up would be necessary if the Natural Areas program in Wisconsin was to be effective. In 1951, the Wisconsin Legislature created the State Board for the Preservation of Scientific Areas. In November 1951, the State Board began its activities with the following membership: C. L. HARRINGTON, Conservation Department, Secretary; G. E. WATSON, State Superintendent, Department of Public Instruction; J. T. CURTIS, University of Wisconsin; ALVIN THRONE, Milwaukee State College (State Colleges); CARL WELTY, Beloit College (representing private colleges, appointed by the Wisconsin Academy of Sciences, Arts and Letters); A. M. FULLER, Milwaukee Public Museum.

The Board is responsible to set up throughout the state a system of scientific areas. It does not own land, nor has it any direct control over any land. After careful studies, recommendations are made to the agencies or individuals owning the areas.

The Board has defined a scientific area as a tract of land in its natural state, set aside and permanently protected or managed for the purpose of preservation of

native plant and animal communities or of rare or valuable individual members of such communities.

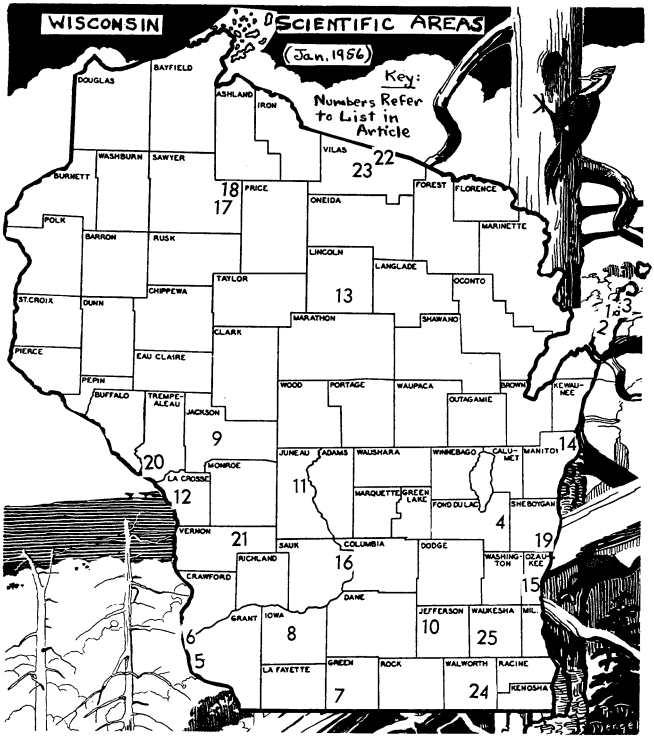
The Scientific Areas are to be used by scientists as outdoor laboratories. They are to be used by educators as field demonstrations or reference areas for the training of future teachers, scientists, and conservation administrators. In some cases the areas are to be devoted solely to the preservation of rare species, for such use as future scientific needs may dictate.

Twenty-five scientific areas have been officially approved by the Board. These areas are listed below. Numbers correspond to those appearing on the accompanying map. Detailed information about each one can be secured from Mr. C. L. Harrington, State Office Building, Madison.

DOOR COUNTY

1. Peninsula Beech Forest, Peninsula State Park; 30 acres. Virgin beech forest with some sugar maple.

2. Peninsula Cedar-Spruce Grove, Peninsula State Park; 40 acres. White cedar-white spruce open forest.



3. Ridges Sanctuary, Baileys Harbor. Ridges Sanctuary, Inc. 700 acres. Very unusual habitat conditions have resulted in perhaps the greatest concentration of rare plants to be found anywhere in the Middle West.

FOND DU LAC COUNTY

4. New Prospect Hardwood Forest, Kettle Moraine State Forest; 5 miles east of Campbellsport. 75 acres. Sugar maple, red oak, basswood forest.

GRANT COUNTY

5. Dewey Heights Prairie, Nelson Dewey State Park. 5 acres. Virgin dry prairie.

6. Wyalusing Hardwood Forest, Wyalusing State Park. 200 acres. Mixed oak forest, with both north and south exposures.

GREEN COUNTY

7. Browntown Oak Forest, Browntown Public Hunting Area. 40 acres. Rich herbaceous flora in oak forest.

IOWA COUNTY

8. Pine Cliff Area, Governor Dodge State Park. 20 acres. Relic pine forest, with red, white and jack pines, all actively reproducing.

JACKSON COUNTY

9. Castle Mound Pine Forest, Castle Mound Roadside Park. 20 acres. Healthy young stand of white pine, with some red pine and jack pine.

JEFFERSON COUNTY

10. Faville Prairie. 4 miles north of Lake Mills. 60 acres. University of Wisconsin. Virgin wet prairie.

JUNEAU COUNTY

11. Necedah Oak-Pine-Forest, U. S. Fish and Wildlife Refuge. 100 acres. Open stand of Hill's oak and jack pine.

LA CROSSE COUNTY

12. Wayona Scientific Area. Highway 53 and 35 between Midway and Onalaska. La Crosse County Park System. 3 acres. Dry prairie. Dedicated to the preservation of remnants of a remarkable colony of pasque flower.

LINCOLN COUNTY

13. Council Grounds Pine Forest, Council Grounds State Forest. 1 mile west of Merrill. 20 acres. Old growth white pine forest.

MANITOWOC COUNTY

14. Wilderness Ridge, Point Beach State Forest. 40 acres. Abandoned beach line of Lake Michigan, with excellent hemlock reproduction.

OZAUKEE COUNTY

15. Cedarburg Bog. 208 acres. 2 miles west of Saukville. Wisconsin Conservation Department. Tamarack swamp forest with some white cedar and black spruce.

SAUK COUNTY

16. Parfrey's Glen, Merrimac. 88.6 acres. Wisconsin Conservation Department. Rocky ravine rich in mosses, liverworts and ferns.

SAWYER COUNTY

17. Flambeau Hemlock-Hardwoods, Flambeau River State Forest. 360 acres. 6 miles north of Hawkins. Virgin forest of hemlock, sugar maple and yellow birch.

18. Pickerel Lake Conifer-Hardwood Forest, Flambeau River State Forest. 100 acres. One of the finest examples of virgin forest to be found in Wisconsin.

SHEBOYGAN COUNTY

19. Cedar Grove Hawk Refuge. 31.7 acres. Wisconsin Conservation Department. Gathering place for hawks during migration.

TREMPEALEAU COUNTY

20. Brady's Bluff Prairie, Perrot State Park. 30 acres. Virgin dry prairie on steep bluff.

VERNON COUNTY

21. Mt. Pisgah Hemlock-Hardwoods, Wildcat Mountain State Park. 30 acres. Ontario. Relic stand of hemlock-hardwoods.

VILAS COUNTY

22. High Lake Spruce-Balsam Forest, Northern Highland State Forest. 40 acres. Between Winegar and Land o'Lakes. White spruce-balsam fir forest.

23. Trout Lake Conifer Swamp, Northern Highland State Forest. 15 acres. 6 miles south of Boulder Junction. Mature conifer swamp of white cedar, black spruce and tamarack, with a rich understory of typical bog plants.

WALWORTH COUNTY

24. Wychwood Oak Forest, Lake Geneva. 70 acres. University of Chicago. White oak-red oak forest. Open for study by prior arrangement only.

WAUKESHA COUNTY

25. Scuppernong Prairie, Kettle Moraine State Forest. 45 acres. 2½ miles northwest of Eagle. Wet prairie, with small oak opening.

# # #

A NOTE ON THE COVER PAINTING

Professor John Barton, rural sociologist of Wisconsin's College of Agriculture and one of the fathers of that college's Rural Art Program, writes of our painter in his book*: "The chains of habit and convention will never bind the life of this young woman." And indeed ELIZABETH FAULKNER NOLAN offers us no conventional painting in her oil on our cover entitled "Portrait of Dad."

Using a still life melange of farm implements and carpenter tools as symbols to evoke the personality of her father, she runs a fully charged brush over her canvas to come up with a light-bathed, characteristically sensitive painting which may be appreciated at several levels: aesthetic and allegoric.

The young artist is the product of many generations of farm people; some of whom are known to have possessed art skills. She is not an end product either, since she lives on a farm near Waukesha with her engineer husband and their two young children. While she continues her painting she is considered to have graduated from the ranks of the amateur painters who comprise the Rural Art Program. This is by reason of her prize winning proclivities and her participation in professional art exhibitions.

"Portrait of Dad," however, was painted by Elizabeth Nolan while she still engaged in the vital program which has enriched the lives of so many of the talented residents of our State.

--Aaron Bohrod

* "Rural Artists of Wisconsin" by JOHN RECTOR BARTON. The University of Wisconsin Press. 1948. Cover painting also from this copyrighted book, p. 113.

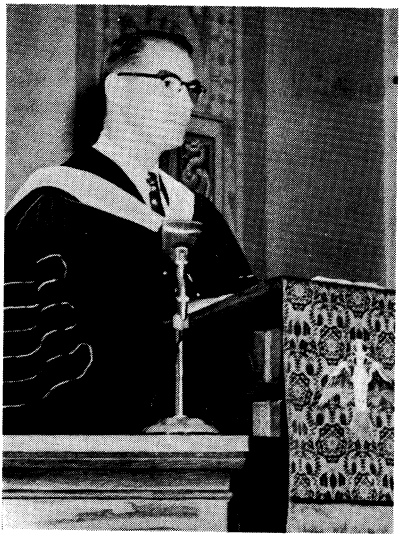
# # #

FIRST ISSUE WANTED

As no copies of Vol. I, No. 1 of the Wisconsin Academy Review for Winter, 1954 (with the golden cover) were offered at 50¢, the editor now offers to pay $1.00 a copy for any in fair condition. If you are not collecting them, your assistance will be appreciated in helping to fill sets for libraries. ---W. E. Scott

THE INAUGURATION OF PRESIDENT PINKHAM AT RIPON COLLEGE

Photos and information by Carl Steiner,
Public Relations Officer



Dr. Fred O. Pinkham,
newly elected president
of Ripon College

On October 21, 1955 Ripon College inaugurated its eighth president, Dr. FRED O. PINKHAM. A colorful processional opened the afternoon ceremony. Following the invocation, the original college charter of the 105-year old school was presented to Dr. Pinkham by S. N. PICKARD, chairman of the Board of Trustees of Ripon College.

Mr. Pickard remarked: "Ripon College, like yourself, Dr. Pinkham, is a staunch advocate of the liberal arts. . . Here students and faculty are assured of freedom of inquiry and encouraged to search for the truth in whatever project they undertake. . . . Under your leadership we are completely confident the college will continue to progress and be increasingly useful to those it serves as well as an effective instrument in preserving freedom and democracy in this great country."

One of the youngest college presidents in the country today, Dr. Pinkham accepted the Ripon presidency after having been executive director of the National Commission on Accrediting in Washington, D. C. Previously he had been assistant to the president at George Washington University in the nation's capital.

In his inaugural address, Dr. Pinkham stated in part:

"It falls to education to produce the intelligent citizenry upon which our way of life depends. The individual can reign supreme only to the extent that we are able to discipline ourselves and to function intelligently as contributing members of society.

"The Good Life for us all hinges upon the liberation of mind, soul, and body of each one of us. This liberation can flourish only in an atmosphere of freedom--freedom rooted in faith in each other as men of good will. By his very nature man must live by a hope for something better, not from a fear of something worse. Real freedom grows from faith, not fear. No man is free who is afraid.

"An individual is 'liberated' through the learning process extending from the development of skills and abilities, to acquisition of knowledge, to increase in understanding and appreciation, to refinement of critical insight, to the expansion of wisdom. This allows him to perform as a happier, more capable and thoughtful citizen. To provide an organized, concentrated program of liberating experiences is the first purpose of the liberal arts college. . . .

"The liberal arts program is the nourishment of all higher education. It is the soil from which the gigantic education tree draws sustenance. The quality and quantity of fruit born by the tree depends more upon the richness of the soil than upon the pruning and packaging of its produce. In the simplest of terms, liberal education is a means of enriching the mind and spirit. The greatest need in the technological world we live in today is for men and women with rich minds and rich spirits."

Dr. Pinkham (left) and Mr. S. N. Pickard

U W BOARD OF REGENTS and ADMINISTRATORS

This picture, taken on November 12, 1955 by U.W. photographer Gerhard R. Schulz, shows the complete University of Wisconsin Board of Regents at a meeting with participating administrators. In the background is a painting of the Wisconsin Academy's (and the University's) venerable past-president, Edward A. Birge.

Reading from left to right around the table are: Regents Wilbur N. Renk, Sun Prairie; A. Matt. Werner, Sheboygan; George E. Watson, Madison; Oscar Rennebohm, Madison; Mrs. Melvin R. Laird, Marshfield; Ellis E. Jensen, Janesville; Chester O. Wanvig, Milwaukee; Carl E. Steiger, Oshkosh; John D. Jones, Jr., Racine;
Members of the university administration: Clarke Smith, regent secretary; A. W. Peterson, vice-president of business and finance; J. Kenneth Little, vice-president of student affairs; Ira L. Baldwin, vice-president of academic affairs; Edwin B. Fred, president, and the president of the Board of Regents, Charles D. Gelatt, La Crosse.

# # #

BE SURE TO MARK YOUR CALENDAR FOR MAY 4 & 5, 1956 —
86th ANNUAL ACADEMY MEETING AT MARQUETTE UNIVERSITY, MILWAUKEE

INTRODUCING LINDLEY J. STILES

(Prepared from U.W. News Service releases)

The new dean of the University of Wisconsin School of Education, LINDLEY JOSEPH STILES, comes to this state from Virginia, where he held a similar position with the University of Virginia and also was director of their Summer Session.

He succeeded Wisconsin Academy member JOHN GUY FOWLKES, dean of the Wisconsin School of Education from 1947 until October, 1953, when he resigned the deanship, accepted a temporary appointment as educational advisor to the government of India, and indicated that he desired to return to Wisconsin as a teacher, rather than a dean.

Dean Stiles, 42, was born in Tatum, N.M., earned the A.B., M.A., and Ed.D. degrees at the University of Colorado, and also attended Colorado State College of Agricultural and Mechanical Arts and Stanford University. He began teaching at La Junta, Colo. public schools in 1935, and subsequently taught in the Louisville, Colo. public schools and at the University Hill Junior High School in Boulder, Colo., before accepting his first administrative post. Named director of instruction of the Boulder public schools in 1941, he was appointed principal of Boulder Senior High School in 1943. He was named associate professor of education at the College of William and Mary in 1945, director of student teaching at the University of Illinois in 1946, associate professor of secondary education at Ohio State in 1947, and dean of the School of Education at the University of Virginia in 1949. Since 1951 he also held the post as director of the Virginia Summer Session.

He is a member of many honorary and professional organizations and the author of books and articles on

education. Upon his arrival, he affiliated with the Wisconsin Academy of Sciences, Arts and Letters. Since last September he has traveled the state to become better acquainted with it and has presented his ideas in a number of articles and speeches. Some significant quotations follow:

"'The Atomic Age' can create job opportunities and wealth, and standards of living for all, far beyond our most visionary predictions of today. But the atomic age will be an age of intelligence. Its secrets and benefits can be unlocked and enjoyed only by an educated people. If we are to utilize atomic force for human good, we need more and better scientists, mathematicians, engineers, doctors who are sufficiently capable, creative and daring to be the pioneers of our time. We also need more and better educated leaders in the humanities and the social sciences to keep our quality of living -- our religious, moral and spiritual values and our civic concerns--abreast of material developments." (To Madison Rotary Club,11/5/55)

"We cannot teach a child to reach for the stars with our own hands in our pockets. To teach others, we must feel and show enthusiasm ourselves. There is no substitute for enthusiasm in teaching. The successful teacher is enthusiastic about the students he instructs, the subject matter he teaches, and the importance of education itself to the individual and to our nation. The good teacher also is enthusiastic about life itself and meets his own life problems with assurance and zest that will serve as an inspiration to others." (To Wis. Education Association, 11/3/55).

"There is need to make it possible for faculty members to give more attention to basic research. The educational controversies which have attracted national attention during recent years point to problems the solutions to which, in most cases, only will be found through systematic, objective investigation and experimentation. Furthermore, with steps now being taken to coordinate the educational contributions of state institutions of higher learning in Wisconsin, added emphasis is placed on the University's responsibility for research in all fields. With appropriate attention to and support of basic research, pressing educational problems may, in response to the sifting and winnowing process to which Wisconsin is so aptly dedicated, ultimately yield to the irresistible force of established truth." Besides basic research as a primary goal of the School of Education, Dean Stiles cited two others including the training of professionally competent teachers and "to be of service to schools and members of the teaching profession in Wisconsin." (Wisconsin Alumnus, 11/15/55). # # #

WHY DOESN'T JOHNNY STUDY SCIENCE?*

By John G. Surak, Chairman
Chemical Education Committee
Milwaukee Section, American Chemical Society

The shortage of scientific personnel is one of the most important problems besetting our nation today. While the minimum annual requirements for technical personnel is approximately 50,000, less than 25,000 graduates per year have been available from the various universities, colleges and technical institutions. Of the 9,500 teachers graduated last year, less than 900 were qualified to teach the sciences and mathematics, but one-fourth to one-half will be diverted into other occupations by more attractive employment opportunities, into military service or for other reasons. Of the 10,000 boys and girls who are bright enough to become chemists, physicists and engineers, about 5000 will finish college and only about 500 will actually graduate in one of the natural sciences.

Why is there a shortage of scientists? Whose responsibility is it to supply the nation with these technically trained personnel? To determine the consensus of opinion of the chemists in the Milwaukee Area, Mrs. Frances Rudert conducted a survey "Does Science Offer Career Opportunities," among the membership of the Milwaukee section of the ACS. Of 210 questionnaires mailed out, 46% were returned. The majority of the returns were emphatic in their statement that the shortage of scientific personnel was a result of the present philosophy which encourages the student to express himself freely and to do as he pleases with emphasis on extracurricular activities. As a result, unless a pupil is highly motivated in becoming a scientist, he neglects science and mathematics. Science and mathematics, in many cases, are elective courses in the secondary schools.

An interest in science is not developed early enough, because a sequential grounding in elementary mathematics is necessary for later science study. The "time of decision" for a potential science student is often in junior high school. Another key influence is the high school teacher who advises the pupil on his future study program. Unless the teacher's sources of information are adequate, the value of his advice may be open to question. It is in this area that the local section of the ACS can be of inestimable assistance.

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* - Selection from an article on page 206 of The Amalgamator of Dec. 1955 (v.10,no.9), official bulletin of the Milwaukee section, ACS. This article also contained a summary of the marital status, occupation and formal training of the members who returned questionnaires.

DOMAIN OF LETTERS

Collected by Prof. Ralph A. McCanse
Associate Editor in Letters

Mrs. Oscar Rennebohm, wife of a former governor of Wisconsin, is our guest contributor, discussing her favorite subject. The bookplate reproduction shows the prize-winning entry in a state-wide contest among members of the Wisconsin Federation of Women's Clubs. A panel of four judges, including Academy Librarian Gilbert Doane, selected the entry of Grace R. Gilbertson of Rochester. The author of "Anticipated Journey" was introduced in the last issue.

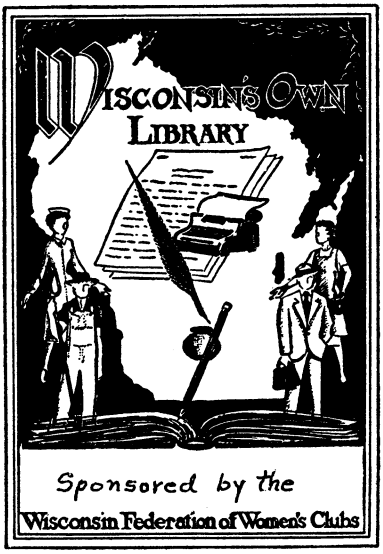
"WISCONSIN'S OWN" LIBRARY

By Mary Rennebohm, Librarian
Madison

In 1949, the State of Wisconsin purchased a new Governor's Mansion. Its spacious rooms were perfectly adapted to official functions - such as Teas, Receptions and Dinners - where hospitality would be extended to Wisconsin citizens and to official visitors from outside the State. The attractive library in the new mansion had one entire wall arranged with shelves; the lovely arched area seemed to plead for appropriate books. What could be more appropriate than a Collection of the literary works of Wisconsin Authors?

It seemed possible that such a Collection might be assembled, if I had the help of some state-wide organization, such as the Wisconsin Federation of Women's Clubs. Its representative membership, of more than 22,000 women, distributed over the entire State, its permanence as an organization and its keen interest in anything that is typically "Wisconsin," made it the logical selection as a sponsor for my project. The following quotation is from the original brochure presented to the Executive Board of the State Federation, asking that organization to accept sponsorship for the proposed library:

"During the past century, native Wisconsin Authors have written and published a wealth of literary works. In most instances, these have reflected the inspiration and stimulus received from the 'good life' so abundantly enjoyed here in Wisconsin. How fitting it would be if a copy of each of these publications could be found, permanently preserved in one collection, commemorating the



authors of our State! Such a collection would truly be "Wisconsin's Own" Library! It would be a 'Treasure Store' to which the State, its citizens and the sponsors could point with possessive pride. Here would be a collection of the literary contributions of Wisconsin's own authors, assembled, preserved and displayed for the contemplation, use and enjoyment of all interested visitors. It has been said that 'the true measure of the greatness of a man is the length of his shadow as he recedes into the Past.' It would be the purpose of this Library to preserve these 'shadows', so that the greatness of Wisconsin authorship might be evaluated, at any time, by present and future generations."

The idea appealed to the Board, and the Wisconsin Federation of Women's Clubs became the sponsor of "Wisconsin's Own" Library. During the past five years its member clubs have contributed more than 1,000 volumes to the collection.

In two years, the Library had outgrown the space available in the Executive Mansion. When our need became apparent, the University gave us a permanent location in the new Memorial Library Building, on the University campus (Room 220, Humanities Reading Room). Here, our collection has limitless room for expansion. Its 1575 volumes are arranged alphabetically, as to author, for convenient reference and use, and are protected in cases with locked glass doors. A complete card catalogue file and keys to the cases are under the supervision of the reading room attendant, and may be used at any time that the Library Building is open to the public. A biographical Sketch-book is growing with the Library. Each sketch contains brief notes including the date and place of birth, the years spent in Wisconsin, the author's education and vocation, and a list of his best known publications, indicating the ones shelved in our collection.

We define a Wisconsin Author as a person who is born in Wisconsin, or who has established residence here, at some time in his or her lifetime (for approximately four

or more years). Such a qualifying person may write, edit, translate or compile a printed publication. Books may be fiction or non-fiction, adult or juvenile, and they may be on any subject. First editions and autographed copies are especially prized. This is the only collection of its kind in the State, and it is growing each year in prestige and acclaim, as knowledge of its nature and purpose spreads. More and more, authors and friends are sending cherished volumes to be preserved on its shelves.

Because it is sponsored by the Wisconsin Federation of Women's Clubs, it will have a steady growth through future years. Because it is permanently shelved in the spacious new Memorial Library Building on the Wisconsin University campus, it will be approved and protected for as long as our State and University exists.

Carlos Romulo said, "Any project, to enjoy permanency, must follow a cycle of growth through four successive stages - Gestation, Creation, Realization and Appreciation." I feel that "Wisconsin's Own" Library is well into its fourth stage of that cycle. It is a Reality; and, as its existence is more widely publicized, people are beginning to appreciate its purpose, its character and its research value, in the proud history of Wisconsin.

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ADVICE FROM EDWARD A. BIRGE

The late Harry L. Russell made the following statement selected from his address on "Doctor Birge as a Teacher" before the group attending a dinner honoring him on September 5, 1950 in connection with the Symposium on Hydrobiology:

"Dr. Birge's interest was not confined, like that of so many specialists, to his own particular field of thought. ... As my class advisor, he warned me against the danger of over-specialization in a too narrow field. He insisted on my taking courses in history under another marvelous teacher in the University, Professor William F. Allen, when I wanted to load my schedule with more courses in science. He wished his students to secure an all-round training, to get the breadth of view that comes only from a broad survey of the various fields of knowledge. The specialist in pursuit of his own particular line digs his canyon of activity deeper and deeper, narrowing his vision more and more, until he loses his perspective on the broader problems of life. Dr. Birge belongs to the group that views the world from the mountain top rather than from the canyon depth."

ANTICIPATED JOURNEY

When work is done, if there is left for me
A time for play, I mean to take a trip
And visit places I have longed to see
(And not by wheeled contrivance nor by ship
Will I be carried)

My unhurried way
Will lie through farmland, rich with scent of clover;
There will I pause and pass the time o' day
As farmers do - and with my visit over
I'll ask about a likely-looking bay
(Or black or sorrel) deep of chest and thigh;
A horse to carry you throughout the day
And never tire. . .

There must be trails that lie
Remote from traffic - dirt roads that are kind
To horses' feet, and yet lead to the places
Where history has been made... O, we will find
At set of sun, a way into the graces
Of folks along the route. The perked-up ears,
The touch of questing muzzle will invite
A stranger's trust, and banish any fears
That he might have of sheltering through the night
Two travelers - who will go when darkness ends,
Enriched by that great treasure, new-found friends!

---Dana K. Akers

LASKER AWARD TO KARL PAUL LINK

On November 17, 1955, the American Public Health Association at their 83rd annual meeting presented a $1,000 Lasker Award with a gold statuette to U. W. biochemistry professor KARL PAUL LINK, who has been a member of the Wisconsin Academy since 1944. His citation, for "outstanding achievement in medical research," read as follows:

"It had long been recognized that the ingestion of spoiled sweet clover produced hemorrhagic disease in cattle, but the responsible agent was unknown. Professor Link accepted this challenge about 1933 and after seven years of intensive investigation reported the successful culmination of his work and that of his co-workers with the recognition, isolation and development of the formula and synthesis of dicumarol in a classic series of papers.

"This opened a gateway to the further study of the mechanism of blood clotting and to the treatment of many important diseases of the heart and blood vessels for which little had been done in the past.

"Clinical investigators in all civilized countries have continued to use this drug for increasing numbers of patients. His work also encouraged others to develop new compounds with similar actions. Dr. Link and his co-workers have continued their investigations and have reported the actions of additional compounds which are being used clinically today.

"In view of the vast number of individuals affected by thromboembolic diseases each year and the fundamental steps taken by Dr. Link toward the solution of these problems, he has earned the deep gratitude of the medical profession and the lay public of this and coming generations."

# # #

LIBRARIANS CELEBRATE 60th ANNIVERSARY

The 60th Anniversary of the Wisconsin Library Commission and the Wisconsin Library Bulletin is being celebrated by librarians in the Wisconsin Library Association which is over 60 years old itself. Editor of their present Bulletin, Academy Member Orrilla T. Blackshear, makes the following comment in their issue of Sept.-Oct. 1955:

"From Volume 1, Number 1, to Volume 51, Number 4 of the Wisconsin Library Bulletin, the articles, news, and book notes tell the story of the Commission's work through the past sixty years. Reading through the early volumes, one is impressed over and over with the similarity of the library problems of 1895 and 1955 and the years between. If the pages were not yellowed and brittle, if the date were not so early in this century and names were more familiar, one might easily believe that Volume Seven, Numbers Four and Five, was especially prepared for today's libraries and librarians."

JUNIOR ACADEMY NEWS

By John W. Thomson, Jr., Chairman
Junior Academy Committee

The most important news from the Junior Academy at this time is the election of new chairmen to the district committees and the addition of new committee members. The chairmen of the district committees serve for a two year term and may not immediately succeed themselves. ROLAND TRYTTEN, Chemistry Dept., Wisconsin State College, Stevens Point, is the new chairmen of the central district. RAPHAEL HAWLEY, Wauwatosa High School, Wauwatosa, has been elected chairman of the Milwaukee district. New members of this committee whom we welcome to Junior Academy work are Father ROBERT OSTERTAG, Marquette Univ. High School, Sister M. ANNUNCIATA, St. Catherine School, Racine, Sister M. EVELYN, Messmer High School, Milwaukee, as well as the chairman, Mr. Hawley.

The West High Science Club, West High School, Madison, is planning to issue a number of the Test Tube Times under the editorship of TED ODELL and MARY MENNES. Academy members who would like to see copies of this high school science student publication should write the Junior Academy office for samples.

Science Fairs will be prominent in Wisconsin this spring. The Southeastern Wisconsin Science Fair sponsored by Marquette University and the Milwaukee Journal will be held at Marquette University on April 12 to 15. The Kenosha County science fair will be held somewhat earlier and a group of Wisconsin science teachers have organized a non-competitive science fair to be held at Wisconsin High School, Madison, on April 28. Arrangements should be made with MILTON O. PELLA or JOSEPH KENNEDY for exhibits at this fair, which last year had over 200 entries.

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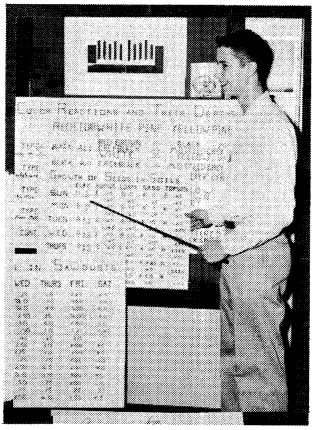
THE DIGESTION OF SAWDUST

By Robert C. Hartwig
Messmer High School, Milwaukee

The purpose of this experiment is to see if fungi would break down the sawdust into a compost that would support growth. After having obtained half-pint milk bottles, they were sterilized and filled with sterile sawdust of three kinds: red cedar, white pine, and yellow pine. This sawdust was inoculated with four types of fungi: Polyporus hirsutus, Polyporus sulphureus, Polyporus adustus, and Armillaria mellea. Within a few days, various color reactions were visible. These colors were mostly blacks, greys, and browns. Of course, some of the original colors were still visible.

When the growth of the fungi had apparently stopped, the bottles were opened in preparation for planting with buckwheat seeds. These seeds were first disinfected in a one-tenth of one per cent solution of sodium hypochlorite. The seeds germinated in two days and their day-by-day growth was recorded.



Five kinds of soils were also used as a comparison with the sawdusts: clay, humus, loam, sand, and topsoil. These were each inoculated with a different type of fungus and after the fungi had reacted, were planted with some of the buckwheat seeds.

The following conclusions can be drawn about the growth of the seeds in the treated sawdusts and soils and their respective controls:

The seeds in the white pine came up the best, with the seeds in the yellow pine the next best. Those in the red cedar were a poor third, with not much growth except in the first two types of fungi.

The seeds in the sand came up the best of all, with those in the clay next best. The others grew very little with the inoculated loam being the exception.

As a whole the seeds in the sawdusts outgrew those in the soils and exceeded their heights by almost a few inches in some cases.

It would have been much better in the long run to have run two or three bottles of each type in order to draw more concise conclusions because the bottles may have been affected either by differences in moisture content or else by changes in temperature.

After much more experimentation, through the use and application of these methods, many tons of sawdust that are ordinarily wasted could be put to a more profitable use.

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CAN FISH SEE COLOR?

By Ned Cochrane
Neenah High School, Neenah

Can fish see color? This is a question that I have pondered over many times while fishing. To read about it confuses me all the more. One outdoor writer says they can, another says they can't, and still another says it doesn't make any difference. But to me it does make a difference. All through the winter I make artificial flies for trout and other fish. I go to a lot of trouble trying to get the right shades of colors into my flies and blending the various colors together.

Last fall, with the aid of my biology teacher, Mr. John Gundlach, I set out to prove what I could. I caught 28 fish, two to five inches in length, in Lake Winnebago and a small northern lake--9 bluegill, 7 yellow perch, 5 bullhead, 3 white crappie, 2 sunfish, 1 shiner minnow and 1 carp.

My first experiment was with dyed shrimp. The idea was to dye one shrimp red and another blue, for example. When I gave the fish the red shrimp I'd let them eat it, but when I put the blue shrimp in the tank, I'd give the fish a shock with an A.C. shocker from an old telephone. The fish ate enthusiastically at undyed

shrimp but I couldn't find a dye that I could use that would hold in water and not affect the taste or smell of the shrimp. Leastways, the fish would not eat dyed shrimp.

My second experiment was putting different colored tin can covers in the aquarium with the fish while they fed. This was successful. All the fish that lived I conditioned to be afraid of the color blue. This is how I did it: I fed the fish ordinary tropical fish food. I put in the red can cover. This acts as a control, so the fish do not become afraid of any can cover put into the water. When I put in the blue cover, I shock the fish. They eventually got so they would stay away from the blue can cover without being shocked. Sometimes just a glimpse of the blue cover sends them streaking to the far side of the tank, while other times they back away slowly when you put the blue cover right in the water. Why this is, is beyond me. It's probably for the same reason that fish bite better on some days than on others.

At school I had all the fish in a 50-gallon aquarium. I gave them a "lesson" about three times a week, each "lesson" being about an hour long. During this time I would shock the fish about four times. The bullheads were the first to respect the blue, probably because they are scaleless and get a little more jolt from the shocker. It took them an average of seven lessons to become conditioned. The perch took nine, bluegills ten, sunfish 11, and the shiner minnow took 14. The carp fed on the bottom and seldom got shocked but by keeping him hungry I was able to see a certain respect for blue tin can covers in him after many lessons. All the white crappies died.

I have not yet been able to figure how well fish can distinguish colors or shades of colors. I am working on that now. But I have proven to my own satisfaction, anyway, that fish can see colors.

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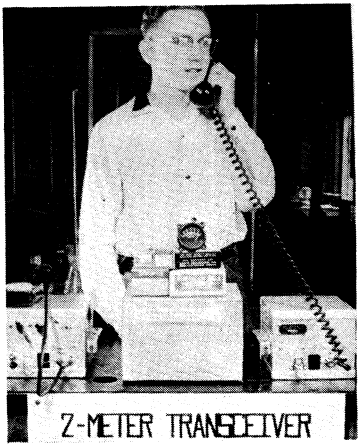

A TWO-METER TRANSCEIVER

By Don Boelter
Lincoln High School, Wisconsin Rapids

My project in the Junior Academy of Science this year was to design and build a small, portable, economical, walkie-talkie. After taking a night school course in radio, I found that the single-ended VHF oscillator and the superregenerative receiver could be combined into one circuit. This circuit would function as either a transmitter or as a receiver depending on the position of a separate switching circuit. After considering the characteristics and testing the operation of several different tubes, I settled on a 604 high frequency triode as the best for my purposes.

After construction of the actual equipment was completed and all the bugs such as BCI, TVI, drift, proper antenna coupling, etc., were ironed out, I tested two of the units under actual conditions of use. The ranges of the units ran from 3/4 to 3 or 4 miles as

the upper limit depending on the location. In areas of level terrain the range was greatest, while in cities or where there were many obstacles such as buildings, high hills, etc. the distance covered was less. Weather conditions seemed to have no appreciable effect on the quality of the signal nor the range covered.

These units are to be put to practical use as emergency communications devices and as temporary amateur radio stations. They will be mounted on motorcycles to increase their usefulness.

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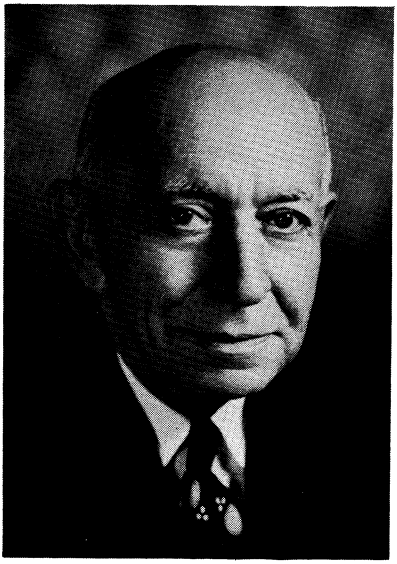


FABIAN BACHRACH

In Memoriam

David Clark Everest

1883-1955

DAVID CLARK EVEREST, chairman of the board of Marathon Corporation, died at Wausau, Wisconsin, October 28, 1955. He was born October 13, 1883 at Pine Grove, Michigan.

With a life record of industrial, government and community service matched by few men, Everest was recognized not only as a leader in the pulp and paper industry but also as an outstanding figure in public service and education.

A member of the State Historical Society of Wisconsin since 1911, Everest was president of the organization from 1952 to June 1955 and was a member of the board of curators. As an outgrowth of his intense interest in the history of Wisconsin, the Historical Society in 1949 established the David Clark Everest Prize in Wisconsin Economic History. This $1,000 award is conferred for the best study of Wisconsin economic history.

His historical interest also took him out of Wisconsin as a member of the New England Historical and Genealogical Society and the American Association for State and Local History.

A pioneer in the field of conservation, he in 1952 served the United States Secretary of Agriculture as consultant on forest pest control. Closely allied were his affiliations with organizations such as the Forest Products Research Society, American Forestry Association, Forestry Industries Council, Trees for Tomorrow, the Forestry Advisory Committee of the Wisconsin Conservation Department and the Conservation Committee of the National Association of Manufacturers. He was one of the sponsors and planners of the first State Forestry Conference held in Milwaukee in 1928 and was chairman of the General Planning Committee of the Silver Anniversary Forestry Conference held in that city in 1953.

Everest, at the time of his death, was a vice-president of the board of trustees of Lawrence College, Appleton, Wis. and had been a trustee since 1930. He was also a member of the board of directors of the University of Wisconsin Foundation. The D. C. Everest junior-senior high school near Rothschild, Wis., was named in his honor in August, 1952.

He was awarded an honorary doctor of business administration degree by Northland College, Ashland, Wis., and honorary doctor of laws degrees by the University of Wisconsin and Lawrence College.

Everest also held positions as president and director of a number of prominent companies; was president of the American Pulp and Paper Association in 1927-28 and 1937-38 and was an active member of the Technical Association of the Pulp and Paper Industry and owner of the 1944 TAPPI Gold Medal Award. He was a member of the Wisconsin Academy of Sciences, Arts and Letters since 1942.

---Charles Inglis
Public Relations Manager
Marathon Corporation

In Memoriam - Chester Albern Herrick 1893-1955

The untimely death of CHESTER ALBERN HERRICK on October 13, 1955, removed from the faculty a man who exemplified in a remarkable way the spirit of a true teacher, investigator and gentleman.

Born on April 12, 1893, at Kirwin, Kansas, in a family of modest means, he found it necessary when he entered college to work his own way through his undergraduate years. He was graduated from Kansas State College in 1921 with the B.S. degree, following an interruption of his academic work by two years of service as a radio technician in the Signal Corps of the U.S. Army in World War I. In 1923 he received the M.S. degree from the same university. His work there, under Professor James E. Ackert, first established the principle of host age resistance to worm parasitism. Continuing his studies on host-parasite relations at Johns Hopkins University, he received the Sc.D. in 1925, and spent the following summer in research work for the International Health Board in Alabama.

Professor Herrick remained at Johns Hopkins, first as research associate and later as instructor, until he came to the University of Wisconsin in February, 1927. His studies on host-parasite relations at Kansas State and Johns Hopkins provided the basis for a career of exploration in this same field at Wisconsin. His appointment was at

first in the Department of Zoology, but was made a joint one between Zoology and Veterinary Science in 1931. He became associate professor in 1936 and professor in 1942 in the two departments. In the years of his joint appointment he performed a thoughtful and useful service in coordinating the related activities of the two departments.

The main courses which Professor Herrick taught in this university were: animal parasites of man, helminthology and medical entomology. During his twenty-eight years at Wisconsin twenty-three students completed their work for the doctorate under his supervision. His major research contributions resulted from investigations in poultry coccidiosis, in which he was a recognized authority, and in helminth infections of ruminants. His basic work on coccidiosis led to the development of the sulfa compounds that are now the most effective medications for the control of this most important disease of poultry. He also cooperated for a number of years in a joint survey of fish parasites in Wisconsin lakes and recently in a joint research program on Nosema disease of bees.

The national societies in which Professor Herrick was most active were the American Society of Parasitologists and the Midwestern Conference of Parasitologists. He served for many years on the Council of the former and for one year as president of the latter. He was also a member of the Poultry Science Assn., the American Society of Zoologists, the Conference of Research Workers in Animal Diseases in North America, the AAAS, the Wisconsin Academy of Sciences, Arts and Letters, Sigma Xi, Gamma Alpha, Alpha Zeta, Gamma Sigma Delta and Phi Kappa Phi. At the time of his death he was chairman of the local organization of Kansas State College Alumni. Great as his contributions to science were, his influence on the lives of others was, if possible, an even greater accomplishment--something to be felt but impossible to measure. ---Adapted from a U.W. Memorial Resolution prepared by the following committee: Burr A. Beach, Michael G. Lysenko, William H. McGibbon, S. H. McNutt and Lowell E. Noland, chairman.

In Memoriam - John Church Hawley 1871-1954

JOHN CHURCH HAWLEY, a member of the Academy since 1942, died at his home in Delray Beach, Florida, April 30, 1954. He was born in Malden, Mass. November 25, 1871, and received his professional training at the Massachusetts Institute of Technology (Class of 1893). He was a practising engineer with various companies until he was appointed Supervisor of one of the provinces of the Philippines by William Howard Taft, then the Governor of those Islands. Upon his return to the United States he became an inspector of factories for the Factory Mutual Insurance Company and lived in Boston and Providence, and later in Detroit. Upon his retirement in 1929, he and his wife, formerly Mary Oakley of Madison, spent their winters in Washington, D.C., and their summers on the old Oakley Farm on the southern edge of Madison. About 1940 they built a house in Delray Beach as a winter home. Mrs. Hawley, well-known to the older generations of Madisonians as a capable and beloved teacher of Mathematics in the city High School, died in Florida January 20, 1952. Both were buried in the Oakley family lot, Forest Hills, Madison.

--Gilbert H. Doane

THE BOOKSHELF

Editor's Note: The bookshelf title illustration used here for the first time is the work of Aaron Bohrod, Associate Editor for the Academy Review and also Academy Vice-president in the Arts. Bohrod, whose initials appear on one of the books, has captured here much of the Academy's spirit and interest. In addition to a shelf of books representing the literary aspect, the other figures represent the arts and sciences, especially chemistry, ornithology, botany, entomology, zoology and archeology. The Academy is indebted to Mr. Bohrod for this contribution.

- - -

ANALYSIS OF SOILS AND PLANTS FOR FORESTERS AND HORTICULTURISTS
By S. A. Wilde and G. K. Voigt

J. W. Edwards, Inc.
Ann Arbor, Michigan
1955 - $3.75

One of the problems facing investigators concerned with chemical and physical properties of soil, humus, and plant tissue is the method of analysis to use. This small volume, a pioneer in its field, goes a long way toward solving this problem. The subject matter is broken down into seven sections:

Analysis of physical properties of soils; Analysis of chemical characteristics of soils; Analysis of ground water; Microbiological analysis of soils, humus and composts; Floristic and mensurational analyses; Chemical analysis of plant tissue; and Determination of morphological and physiological characteristics of nursery stock.

There are innumerable ways to analyze many of the properties covered in this book and the procedures and references given have been drawn from many sources. For some of the tests, such as the organic matter content of soil, several methods are given. For others, such as the determination of the water permeability of soils, only one of many possible methods is listed. Some of the chemical procedures listed are the so-called quick tests, while others require laboratory skill and equipment. Each new property to be discussed is introduced with a statement as to its importance. Following the description of the determination is a complete list of reagents needed and instructions for preparing them.

Sections pertaining to the various analyses are easily located, and several valuable appendices concerned with chemical analysis of soils, soil fertility and conversion factors are included.

This new volume will be useful to those in forestry and horticulture who are interested in obtaining additional information about some of the factors controlling plant growth. There is more to a plant than meets the eye and a knowledge of what is going on underground can be of great value to all those working with vegetation. (By Louis J. Metz. Reprinted with permission from copyrighted Journal of Forestry, Oct. 1955, vol. 53,no.10, p.742)

ON BEHALF OF THE HUNTED
By Lyle H. Kingston

C. C. Nelson Publishing Co.
Appleton, Wisconsin
1955 - $3.00

Kingston writes of the north country--of trout and muskies, of pheasants and grouse, of the deer, bear, timberwolf and skunk. Starting with the fishing season, which is the beginning of the sports year, he uses the calendar to trace his annual round of outdoor events. He draws from a wealth of experience, beginning with his early boyhood, in a region where pronounced seasonal change, wide variation of terrain, and abundance of wildlife make life for the outdoorsman most interesting.

Acutely sensitive to the sights and sounds of the outdoors, a patient and exact observer, the author relates his tales of the wilds in a style so captivating that the reader experiences that rare feeling of actually taking the author's place in his ventures afield. While walking in his shoes we discover that the gun is not the only tool that fashions a successful hunt nor is angling solely the wielding of the rod. A member of a realistic profession, he sees man's abuses of Nature and their consequences. He does not hesitate to point out the distasteful truth and to offer the best solution, in his opinion, for grave conservation problems.

The Hunted, on behalf of which Mr. Kingston pleads, are the finned, the furred, the feathered, and of larger importance, the soil, the forests, and the waters. The book is illustrated throughout with drawings by Charles E. Schaefer of the Michigan Conservation Department. (Paraphrased from book jacket by the Editor).

# # #

MOODS AND MOMENTS
By Lindley J. Stiles

Garrett and Massie, Inc.
Richmond, Virginia
1955 - $3.00

This is an illustrated book of verse written by Dean Stiles, with his wife and daughters, when he was head of the School of Education at the University of Virginia. The verses deal with the Stiles' day-by-day family experiences and he explains his reason for writing the book as follows:

"As a former English teacher long interested in teaching children to appreciate poetry, I have felt there are too few poems written about American children showing how they really feel and act. These verses were written originally as a family project to record, as others might do with camera, brush, or in song, significant moods and moments from life with our two growing daughters, Judith and Patricia. As the result of the encouragement of friends and colleagues with whom we have shared them, they are brought to the public now in the hope that their publication may help other children to find greater enjoyment in poetry which is uniquely about them and their growing up."

Subjects of the verses range from Pat's teddy bear and her "Buy Me Something, Daddy," to Judith's "Lost Vacation" (When one does not meet A single new boy) and her "Bargaining" for new clothes in exchange for a good report card. The volume is attractively illustrated by Sally Sargent Turner of Charlottesville, Va., and designed by Charles W. Smith, chairman of the art department at the Univ. of Virginia. Royalties from the book will go to the scholarship fund for teachers preparing at the Univ. of Virginia to work with handicapped children. (Selected from story of Hazel McGrath of U.W. News Service.)

THE PEOPLES OF WISCONSIN
By William J. Schereck

State Historical Society
816 State street, Madison 6
1955 - $1.00

This is a mimeographed book containing 137 pages of scripts of the Society's Ethnic History Radio Series called "Sounds of Heritage" which first was produced by Radio Station WHA and broadcast over the State Radio Network. The series took first place honors at the American Exhibition of Educational Radio and Television Programs at Ohio State University.

Schereck was leader of the Society's Ethnic and Nationality Groups Research Project and traveled the state since April 1954 to tape-record cultural contributions of about 50 ethnic groups from the standpoint of their traditions, folklore, folk songs, art, dances and festivals. Twelve chapters deal with these individual ethnic groups: Polish, Cornish, Italian, Jewish, Norwegian, Swiss, English, French, Croatian, Irish, Slovak and German. A concluding chapter summarizes the significance of nationality groups in Wisconsin.

# # #

THE AMERICAN COLLECTOR
Edited by Donald R. McNeil

State Historical Society
816 State street, Madison 6
1955 - $2.00

This 66-page book, edited by the assistant director of the State Historical Society of Wisconsin, explores the special world of the men behind the historians--the men who find and preserve the raw materials for the writers of history. It summarizes their responsibilities in four essays which have common roots: each was presented as part of the 1954 centennial commemorating the life and work of one of the greatest collectors of all time, Lyman Copeland Draper, superintendent of the Society, 1854-1886. Three of the essays originally formed a symposium on the American Collector; the fourth (devoted to the Society's Draper Manuscripts) was read as the principal address for the 1954 Founders Day celebration launching the Draper Centennial, by Alice E. Smith, Chief of Research for the Society, who summarized this first great library of source materials on the west. As the other Wisconsin author, Editor McNeil capsules the role of the manuscript collector as "second-guessing the future historian," then unfolds the steps Wisconsin has made toward systematic and specialized collecting.

# # #

LAND TENURE
Edited by Kenneth H. Parsons
Raymond J. Penn, Philip M. Raup

University of Wisconsin Press
811 State street
Madison 5, Wisconsin
1955 - $10.00

The complete written record of The Proceedings of the International Conference on Land Tenure and Related Problems in World Agriculture conducted in Madison, October 8-November 20, 1951, under the auspices of agencies of the U.S. government and the University of Wisconsin. The editors have contributed a Preface and an Introduction explaining the workings of the conference and integrating the points of view expressed by specialists and scholars from more than forty different countries. The opinions and points of view of the widely diverse group of earnest men will be invaluable to sociologists, political scientists, and anthropologists, as well as to economists and agricultural economists. Ownership, inheritance, sale and transfer, conservation, and taxation of land in all parts of the world are among the tenure problems discussed.

# # #

THE FOUR RIVERS OF PARADISE
By Helen C. White

The Macmillan Co.
New York, N. Y.
1955 - $3.50

Helen C. White has been professor of English at the University of Wisconsin since 1936. A number of fine historical novels written by Miss White have received high praise from the reading public. This latest work is set in fifth century Rome during the decadent period that preceded its fall to Alaric and his barbarian hordes. Young Christian Hilary of Bordeaux, through meetings with Jerome, Augustine and the Pope, learned that he had many missions, not only in Rome, but in the whole barbarian world. Helen White has a talent for reviving the authentic sights and sounds, the dramatic personalities and the spirit of former times. (Excerpt from Wisconsin Alumnus, June 1955).

# # #

MISCELLANEOUS BOOKLETS AND LEAFLETS

Some other recent miscellaneous booklets and leaflets by Wisconsin Academy members are listed below:

"How Wisconsin's Population is Changing" by DOUGLAS G.MARSHALL (Feb. 1955), U.W. College of Agriculture, Madison.

"A Summary of Wisconsin Habitat Destruction and Restoration - 1954" compiled by D. JOHN O'DONNELL, (Nov.1955),Wis.Cons.Dept.

"Virus Diseases of Canning Peas in Wisconsin" by D.J. HAGEDORN and J. C. WALKER, Bull.185, Wis.Agr.Expt.Station, Madison.

"Wisconsin SR 6 Cucumber Resists Scab Disease" by J.C. WALKER, Bull.509, Wis. Agr. Expt. Station, Madison.

The following community study reports from the U.W. Bureau of Community Development (Madison) by KENNETH RINDT: "Manitowoc-Two Rivers Trade Area Survey," "The Industrial Climate of Superior, Wisconsin," (Price $1.00), "Economic Base Study of Manitowoc,Wis.," "Economic Base Study of Two Rivers, Wis.," "Industrial Survey of Waupaca, Wis.," "Industrial Survey of Waupaca Area," and "Kenosha - Its Economic Life and Related Aspects."

"Geophysical Methods Applied to Geological Problems in Wisconsin" by GEORGE P. WOLLARD and GEORGE F. HANSON, Wis.Geol. Survey Bull. No. 78 (1954), U. W., Science Hall, Madison.

"Wisconsin Dairying in Mid-Century" - Compilation supervised by WALTER H. EBLING, Bull.No. 331, Wis. Crop Reporting Service, Dept. of Agr., State Capitol, Madison.

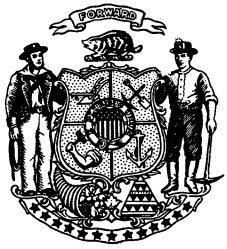
"Results of the 1954 Horicon Marsh Managed Waterfowl Hunt," by LAURENCE R. JAHN, JAMES G. BELL, and LLOYD GUNTHER, (May 1955), Wis. Cons. Dept., Madison.

"Zinc-Lead-Copper Resources and General Geology of the Upper Mississippi District" (with detailed map of the Ill.-Wis. Lead Region), Bull.1015-G of U.S. Geol. Survey, 70¢ from State Geol. George F. Hanson, Science Hall, U.W., Madison

Forestry Research Notes by U.W. Ext.Forester FRED B. TRENK: No.21 - "Factory in an Oak-to-pine Conversion Study;" No.22 - "Intermediate Thinnings and Prunings in Pine Plantation Produce Income, Improve Stand," and No. 23 (with A. R. ALBERT) "Growth and Effectiveness of All-Conifer and Mixed Hardwood-Conifer Shelterbelts on Plainfield Sand."

Lake States Forest Exp. Sta.Technical Notes by J.H.STOECKLER: No. 440 - "European Larch Seed Sources Compete Successfully with Tamarack During 5-Year Test in Northeastern Wisconsin" and No. 441 - "Deer, Mice, and Hares Damage Young Aspen and Paper Birch Plantings in Northeastern Wisconsin."

# # #



State and Academy News

NEWS NOTES FROM THE UNIVERSITY OF WISCONSIN AND WISCONSIN STATE COLLEGE AT MILWAUKEE (Collected by Professor Ruth I. Walker, Review Reporter)

ALVIN L. THRONE, Professor of Botany, Milwaukee State College, spent part of the summer collecting plants in the vicinity of Anghoon, Admirality Island, Alaska. ... P.J. SALAMUN of Milwaukee State College was naturalist at Mammoth Cave, Kentucky for summer, 1955. ... Mrs. KATHERINE WHITFORD is currently on the English Staff at the University of Wisconsin, Milwaukee. ... PHILIP P. WHITFORD, Associate Professor of Botany, Univ. of Wis. in Milwaukee, presented a paper, "A preliminary report on survey of prairie relics in Racine and Kenosha Counties," at the American Institute of Biological Sciences, at East Lansing, Mich. in September. Others from Milwaukee attending the meetings were J. G. BAIER, ELDON WARNER and RUTH I. WALKER. ... T. J. McLAUGHLIN, Professor of Speech, Univ. of Wis., Milwaukee, is secretary-treasurer of the Wisconsin Speech Association and was in charge of arrangements for the annual and sectional meetings held at the Univ. of Wisconsin in Milwaukee on Nov. 4, 1955. Professor McLaughlin conducted a Speakers' Workshop for 50 members of the Milwaukee League of Women Voters at Milwaukee Radio City Auditorium on September 22 and 29, 1955. ... ALFRED BARTSCH, Staff Biologist with Water Supply and Water Pollution Control Program, U.S. Public Health Service, Washington, D.C., is now living in Cincinnati, Ohio, where in addition to his Washington duties he is associated with the new Public Health Service Research Laboratory, The Robt. A. Taft Sanitary Engineering Center.

Papers published in 1955 include:

BAIER, J. G. Precipitin Studies using a photoelectric transmittance technique. Anatomical Record, November 1954.

WALKER, RUTH I. Cytological and Embryological Studies in Solanum, Section Tuberarium. Bulletin of Torrey Botanical Club, March '55.

NEWS NOTES FROM THE U.W. RACINE EXTENSION CENTER
(Collected by Professor John F. Vozza, Review Reporter)

A one act comedy, entitled "The Spirit of Christmas," which criticizes the materialistic pre-Christmas endeavors, was written by FREDERICK TIETZE and was presented to the guests and students of the Racine Extension Center on Dec. 13, 1955. ... Professor TIETZE (English) attended the 70th annual meeting of the Modern Language Association which was held recently in Chicago. ... Professor EDWARD TAUBE (Geography) has had an article, "Tribal Names Related with Algonkin," published in the June, 1955 issue of Names, the Journal of the American Name Society. This will be followed by "Place Names Related with Algonkin." He read a paper on the name "Chicago" at the December meeting of the American Name Society in Chicago.

NEWS NOTES FROM MARQUETTE UNIVERSITY
(Collected by Professor Scott L. Kittsley, Review Reporter)

A grant of $2,725 was awarded the Physics Department by the Argonne National Laboratory for research on the magnetic susceptibility of solid solutions of asmium and iron. Fr. LAWRENCE W.

FRIEDRICH, S.J. will supervise the research project. Fr. Friedrich is also chairman of the executive committee for the Southeastern Wisconsin Science Fair which will be held in Brooks Memorial Union, April 12-16. ... U.W. Professor JOHN T. EMLEN recently discussed the subject of "Population Studies of House Mice" before the Biology Department's Journal Club. ... The National Science Foundation has renewed a $4,300 grant for a Physics Department project to study cosmic rays and nuclear emulsions. Professor ARTHUR G. BARKOW is in charge of the project. ... Education Professor ELLA C. CLARK recently presented her experiences in summer workshops in the area of human relations before the National Council of Social Studies in New York. She also had an article "Helping Johnny Learn to Read," published in the Catholic Educator, for Nov. 1955.

# # #

FORD FOUNDATION GRANTS TO WISCONSIN PRIVATE COLLEGES

Ten Wisconsin private colleges received grants totaling almost three million dollars from the Ford Foundation in December, 1955 "to help them raise teachers salaries" in connection with their half-billion dollar fund distribution program. Amounts listed were:

Alverno College, Milwaukee.....	$ 204,000
Beloit College.....	298,400
Carroll College, Waukesha	126,300
Lawrence College, Appleton	404,400
Marquette University, Milwaukee	1,166,300
Milwaukee-Downer College	123,600
Mt. Mary College, Milwaukee	191,400
Ripon College	152,800
St. Norbert College, West DePere ...	162,600
Viterbo College, La Crosse .....(amt.not listed)	

HONORS AND AWARDS

Besides the honors and awards received by FARRINGTON DANIELS and KARL PAUL LINK reported elsewhere in the Review, the following were recently received by Wisconsin Academy members:

DAVID A. BAERREIS and Dr. EDGAR G. BRUDER, the Lapham Research Medal for distinguished work in the field of Wisconsin archeology; English Professor HARRY HAYDEN CLARK, the Michigan State College Centennial Award; MERLE CURTI, a fellowship for work at the Center for Advanced Study in the Behavioral Sciences; WALLACE BYRON GRANGE, the John Burroughs Medal by the John Burroughs Assn. for the quality of nature writing in his book, "Those of the Forest;" OLAF A. HOUGEN, the first annual Benjamin Smith Reynolds award of $1,000 for "excellence in teaching of future engineers;" M. L. JACKSON, election to fellowship in the American Society of Agronomy; M. STARR NICHOLS, the Charles Alvin Emerson Medal for 1955 and GERARD A. ROHLICH, the Harrison Prescott Eddy Medal for 1955 both from the Federation of Sewage and Industrial Wastes Association; A. W. SCHORGER, honorary degree of D.Sc. from Lawrence College and Service Award from the Wisconsin Farm Bureau Federation; EMIL TRUOG, honorary membership in the Soil Conservation Society of America; J. C. WALKER, Forty-Niner Service Award from Forty Niners Canning Machinery and Supplies Assn. for developing disease resistant crops; English Professor ALVIN WHITLEY, a Kiekhofer Memorial Teaching Award for excellence in teaching.

ORGANIZATIONAL POSITIONS

Wisconsin Academy members who were recently elected or appointed to new positions in professional or official organizations included: CONRAD A. ELVEHJEM, Chairman of the National Research Council's Food and Nutrition Board; JOHN LONSDORF, Treasurer of Wisconsin Regional Writers' Assn.; WILL C. McKERN, First Vice-president of the State Historical Society; RAYMOND J. PENN, Editorial Board of the Land Economics Journal published at U.W.,Madison; FRED SCHMEECKLE, Director of Conservation Education Association; GEORGE E. SPRECHER, President of the American Fisheries Society; JOHN W. THOMSON, Vice-president of the American Bryological Society; Miss FIDELIA VAN ANTWERP, President of the Wisconsin Regional Writers' Assn., and MILLER UPTON, President of the American Finance Association.

Four scientific discoveries made at the University of Wisconsin during 1955 have been named by Science Service as among the year's top achievements in science. The announcement was made in the Dec. 24 issue of Science News Letter, a weekly summary of scientific developments published by Science Service. The four research developments at Wisconsin were:

1. Synthesis of the male sex hormone testosterone directly from simple coal tar chemicals. This was accomplished by Prof. W. S. JOHNSON and a colleague, Dr. RAPHAEL PAPPO, visiting lecturer in chemistry from the Weizmann Institute, Israel.

2. The research that has led to the theory that the chemicals that cause cancer may do it "by attaching their molecules to protein molecules of the animal and human cells that then become cancerous." This work was done by JAMES and ELIZABETH MILLER of the University's McArdle Memorial Laboratory for cancer research.

3. Pure crystals of the chemical kinetin which makes cells divide and "which, theoretically, could be changed to stop cancer." This work was done by CARLOS MILLER and Prof. FOLKE SKOOG of the Wisconsin botany department, and MALCOLM von SALZA and Prof. FRANK STRONG of the department of biochemistry.

4. An enzyme chemical, uricase, involved in gout was isolated, and an old idea of how it works was exploded. This work was conducted by Prof. HENRY MAHLER and HAROLD BAUM, GEORG HUEBSCHER, and GERMILLE COLMANO of the UW Institute for Enzyme Research. # # #

MISCELLANEOUS NEWS

FARRINGTON DANIELS recently had a full page feature article in The Milwaukee Journal (Oct. 30, 1955) on "The Sun: Future Power Unlimited." JAMES A. LARSEN, U.W. Science News Writer, also discussed Professor Daniels' work in this field in his article, "Energy from the Sun" in the Wisconsin Alumnus of May, 1955. ... ANSELM M. KEEFE, St. Norbert College, West DePere is editor of The Biologist, a quarterly journal sponsored by the Psi Sigma Biological Society and printed in DePere, Wisconsin. ... ARTHUR D. HASLER and WARREN J. WISBY of the U.S. Biology Dept. recently had a method they worked out for diverting fish to new

spawning grounds by appealing to their sense of smell patented through the assistance of the U. S. Navy.

U.W. Professor L. JOSEPH LINS has predicted that in 20 years (by 1973) the number of students in Wisconsin colleges and universities will be 63-65 per cent higher than in 1953. ... The U.W. plans to build an $800,000 addition to Sterling Hall on the Madison campus to house the new Mathematics Research Center of the United States Army which will be located there. ... Last fall the U.W. dedicated a $240,000 electronic alternating current network calculator which was set up in the Engineering Building.

U.W. Professor IRA DAVIS, speaking to the recent meeting of the Wisconsin Teachers' Association, stated that the U.S. economy needed one technician for every 200 employes 20 years ago and today needs one for every 20. He quoted figures in teachers graduating in science and mathematics showing a significant drop between 1950 and 1954. ... The U.W. Board of Regents has endorsed a proposal by which the Marathon County Board would pay for the construction of a new $500,000 University Extension building at Wausau. ... A report from the National Research Council recently ranked the University of Wisconsin first in the nation in number of students, 689, receiving scientific doctorate degrees in the 1946-50 period. The scientific fields in which most of these were granted were: chemistry (162), biochemistry (109), agriculture (85), botany (62), engineering (46), physics (40), bacteriology (36), zoology (35), entomology and geology (22).

According to State Geologist GEORGE F. HANSON, the Atomic Energy Commission will probably make a detailed study of the Tomah area where the first of any extensive evidence of uranium in Wisconsin was recently confirmed. ... The 1954-55 report of the U.W. Memorial Library states that during this past year 45,923 volumes were accessioned for a new record. Also, the largest daily volume of books charged out by the circulation department was 1,109 on January 3, 1955. ... Sixteen artists employed by the Milwaukee Public Museum have recently organized as the Society of Museum Artists and KEITH GEBHARDT was elected their first president. ... The National Science Foundation has granted the Univ. of Wisconsin $249,700 to inaugurate an experimental program to train high school teachers to teach science and mathematics more effectively.

The National Agricultural Extension Center for Advanced Study, supported by a Kellogg Foundation grant of $1,239,000, has been established on the U.W. Campus with ROBERT C. CLARK appointed as its first Director. ... Officers recently elected by the Milwaukee Section of the American Chemical Society are: HERBERT L. ELLISON, Chairman; EDWARD A. WILDER, Secretary and ADRIAN KAMMERAAD, Treasurer. ... A new record for peacetime enrollment was set by the U.W. in the 1955-56 school year with a total of 18,169 students of which 15,093 are on the Madison campus and 3,076 at the nine Extension Centers. ... AARON BOHROD held a one man show at the American Gallery in Milwaukee last month. ... FRANCIS D. HOLE is supervising the construction of a regional soil map for 12 states, from North Dakota to Missouri and from Nebraska to Ohio. Wisconsin's soil survey has been delegated by these states to assemble their state maps into one general colored soil map. # # #

ACKNOWLEDGMENTS: Sketches p. 5 and 6, St. Nicholas Magazine, July 1878 and Jan. 1879 respectively; photo p. 9, The Passenger Pigeon, Oct. 1949; sketch p. 10, Charles Schwartz, Missouri Cons. Comm.; sketch p. 25 from St. Nicholas Magazine, 1874.

WISCONSIN ACADEMY EXCHANGES

By Carol J. Butts
Assistant in charge of exchanges
UW Memorial Library

(Continued from Fall, 1955)

Gesellschaft zur beforderung der gesamten naturwissenschafted zur Marburg
Glasgow and Andersonian natural history and microscopical society
Le Globe Societe de geographie de Geneve
Goteburgs k. vetenskaps-och vitterhetssamhalle. Handlingar.
Bihang Series A Humanities. Series B Science
Great Basin naturalist biol.
Halle. Universitet. Wissenschaftliche zeitschrift. Mathemat.-naturwissenschaftliche reihe
Gesellschafts-und sprach-wissenschaftliche reihe
Universitats-landesbibliothek Sachsen anhalt. Schriften
Harvard University. Museum of comparative zoology. Bulletin
Annual report
Hawaiian academy of science. Proceedings
Heidelberger akademie der wissenschaften. Mathematisch-naturwissenschaftlicheklasse Berichte
Hertfordshire natural history society. Transactions
Hessisches landesamt fur bodenforschung. Notizblatt
Hilgardia. U.of Cal.
Hiroshima. University. Journal of science. Ser.A Math. Ser.B
Historischer verein fur Oberpfalz und Regensberg. Verhandlungen
Hong Kong. Dept. of Agriculture. Annual report
Humanistika vetenskapssamfundet i Uppsala. Skrifter
Hungary. Foldtani intezet. Evkonyve geol.
Evi jelentese
Illinois geological survey. Bulletins. Joint UW exchange
Illinois state academy of science. Transactions
Living museum Story of Illinois
Illinois natural history survey. Bulletin
Illinois water survey bulletins
Indiana academy of science. Proceedings
Indiana. University. Joint UW exchange
Innsbruck (Museum) Ferdinandeum. Veroffentlichungen
Institut d'Egypt, Cairo. Bulletin Memoires
Institut d'estudis Catalans, Barcelona. Instituto historico-
Seccion de ciencias. Arxius arquelogia class sep.
Institut grand-ducal de Luxembourg. Archives. Section des sciences naturelles, physiques, et mathematiques
Instituto do Cearo, Fortaleza, Brasil. Revista
Iowa academy of science. Proceedings
Iowa. University. Studies in natural history
Islandica Cornell
Israel. Independent biological laboratories. Bulletin
Israel. Research council. Bulletin
Istituto Lombardo di scienze e lettere. Rendiconti.
Classe di scienze Classe di lettere Parte general
Japan. Academy. Proceedings
Japan. Geological survey. Reports Bulletins
Japanese journal of botany biol.
Jena. Universitat. Wissenschaftliche zeitschrift. Mathemat.-
Gesellschafts-sprachwissen naturwisschaft
John Crezar library. Bibliography series
Kansas academy of science. Transactions
Kansas. University. Joint UW exchange
Kentucky academy of sciences. Transactions
Kew. Royal botanic gardens. Hooker's Icones plantarum

The list of Academy exchanges begun in the Fall 1955 issue is completed herewith. As indicated in the introduction, out-of-town members wishing to consult listed publications may obtain them by inter-library loan or, by special arrangement, by direct loan through the Inter-library loan department, Memorial Library, Univ. of Wisconsin, where the collection is housed.

La Plata. Universidad nacional. Facultad de ciencias fisicomatematicas. Publicaciones Serie II. Revista
Facultad de ciencas quimicos. Revista
Leeds philosphical and leterary society. Proceedings.
Leidische geologischr medelingen.
Leipzig. Deutsches institut fur landerkune. Wissenschaftliche veroffentlichungen
K.Leopoldihisch-Carolinsche deutscheakademie der naturforscher. Nova acta Leopoldina
Liege. Universite. Archives
Linnean society of New South Wales. Proceedings
Liverpool and Manchester geological journal
Liverpool University. Dept. of oceanography. Marine biological station. Annual report
Lloydia Lloyd library and museum
Los Angeles. University of Southern California. Allan Hancock foundations. Occasional papers
Louisiana academy of science. Proceedings
Lund. Sweden. University. Arsskrift
Slaviska institutet. Arsbok Meddelanden
Madjahlah Ilmu untuk Indonesia. Indonesian journal for natural science
Madras. Government museum. Bulletins. Natural history series. Guide series
Magyar tudomayos akademie, Budapest. Acta technica
Akademiai ertesito
Manchester geographical society. Journal
Manchester literary and philosphical society. Memoirs
Marburg. Westdeutsche bibliothek. Augbau und entwicklung
Marine biological association of the U.K. Journal
Marseilles. Museum d'histoire naturelle. Bulletin
Massachusetts institute of technology. Joint UW exchange
Mathematical society of Japan. Journal phys-math
Melhoramento; estudios da estacao de melhoramento de plantas
Mexico city. Escuela nacional de ciencias biologicas. Anales
Mexico. Observatorio astronomico nacional. Boletin
Mexico city. University. Instituto de biologia. Annles
Instituto geologico de Mexico. Boletin
Michigan academy of science, arts and letters. Papers
Milwaukee public museum. Bulletins Publications in botany
Publications in anthropology Popular handbook series
Minnesota academy of science. Proceedings
Mississippi academy of sciences. Journal.
Missouri botanical garden. Annales Bulletin
Missouri. University. Joint UW exchange
Montana academy of sciences. Transactions
Montana. University. Dept. of sociology. Anthropology & sociology
Montevideo. Instituto de investigacion de ciencias biologicas. Publicaciones
Montevideo. Museu de historia natural. Anales. Cominicaciones zoologicas
Morovaska prirodovedecke spolecnosti. Brunn. Vyrocni zprava
Moravskoslezske akademie ved prirodnich, Brunn.

Munster. Museum fur naturkunde. Abhandlungen.
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Nagoya journal of medical science.
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Naples. Universita. Istituto e museo di zoologica. Annuario
Nassauischer verein fur naturkunde. Wiesbaden. Jahrbuch.
Natal government museum. Pietermaritzburg. Annales
National institute of sciences of India. Proceedings
Natur und volk. Senckenbergische naturforschende gesellschaft
Natural history miscellanea Chicago academy of science
Naturaliste Canadien
Naturforschende gesellschaft, Bamberg. Bericht
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Naturforschende gesellschaft in Bern. Mitteilungen
Naturforschende gesellschaft graubunden Chur. Jahresberichte
Naturforschende gesellschaft, Freiburg
Naturforschende gesellschaft, Zurich Vierteljahrsschrift
Naturhistorisch-medizinisch vereins. Heidelberg. Verhandlungen
Naturhistorische gesellschaft zu Hannover. Jahresbericht
Naturwissenschaftliche-medizinischen verein. Innsbruck. Berichte
Naturwissenschaftlicher verein fur Schewig-Holstein. Schriften
Naturwissenschaftlicher verein fur Schwaben. Abhandlungen
Naturwissenschaftlicher verein fur Steirmark. Mitteilungen.
Naturwissenschaftlicher verein. Osnabruck. Jahresberichte
Naturwissenschaftlicher verein. Bremem. Abhandlungen
Naturwissenschaftlicher verein Karlesruhe. Betragte
Naukove tovaristvo iming shevchenka. Istorichio filosofichna sektsio. Proceeding
Nebraska academy of sciences. Abstracts of papers
Nebraska. University. Joint UW exchange
New Hampshire academy of science. Proceedings
New York academy of sciences. Annales
New York academy of sciences. Transactions
New York botanical garden. Garden journal
New York state museum. Circular
New Zealand geological survey. Bulletins. Memoirs
Palaeontogical bulletins
Nabelstiftelsen, Stockholm. Les pris Nobel
Norfolk and Norwich naturalists society. Transactions
Norsk meteorologisk arbok geol.
Norske videnskabern selskap. Tronheim. Musee. Forhandlingun
Skrifter
Norske videnskaps-akademie i Oslo. Hist-filos klasse. Skrifter Abhandlunger
Met-natur.klasse. Skrifter Abhandlunger
Hvaladents skrifter Arbok
Norske videnskabers selskab. Skrifter Forhandlinger
North Dakota academy of science. Proceedings
Nova Scotian institute of science. Proceedings
Nytt magazine for botanik
Nytt magain for zoologi

Oberhessischen gesellschaft fur natur -und heilkunde, Giessen.
N.F. Naturwissenschaftliche abteiling.
Oberostreichisches musealverein, Linz. Jahrbuch
Ohio journal of science.
Oklahoma A & M college. Joint UW exchange
Oklahoma academy of science. Proceedings.
Opava. Sleske museum. Casopis slezskeho museu, Series A Series B
Oporto. Universidade. Faculdade de ciencias. Anais
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Palermo. Istituto ed orto botanico. Lavori
Panjab university. Hoshiapur. Research bulletin
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Perthshire society of natural science. Transactions
Physikalisch-medizinische gesellschaft Wurzburg. Berichte
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Instytut geografii. Prace geograficzne
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Polska akademie umijetnosci, Krakow. Bulletin international A. Sciences mathematiques B. Sciences naturaliste
Sprowozdania z czynnosci i posiedzen
Poona university. Journal
Portugal. Commisao do servico geologica Communicacaos
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Prague. Narodni museum. SbornikB Sbornik...Acta...A
Preslia Ceskoslovenska botanica spolecnost
Provinciaal utrechtsch genottschap van kunsted en wetenschappen Verslag
Prussia. Geologische landesanstalt. Abhandlungen geol
Archiv fur lagestattenforschung Mitteilungen
Prseglad zachodni Posen. University. Instytut zachodnia-slowianski
Purdue university. Joint UW exchange

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Rio de Janiero. Jardim botanico. Arquivos
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Rochester academy of science. Proceedings
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Rosario. Argentina. Universidad nacional de litoral. Instituto de investigaciones microquimicas. Publicaciones
Rostock. Universitat. Wissenschaftliche zeitschrift. Gesellschaft- und sprach Mathematisch-naturwissenschaftliche reihe
Royal Canadian institute. Transactions and proceedings
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Salo, Italy. Ateneo di Salo
San Diego society of natural history. Occasional papers. Trans.
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Sapporo natural history society. Transactions.
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Sarawak, Borneo. Sarawak museum. Journal
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Societa dei naturalisti e matematici de Modena. Atti.
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Societe royale de zoologie d'Anvers. Bulletin
Societe royale des sciences de Liege. Bulletin. Memoires
Societe royale zoologique et malacologique de Belgique. Annales
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Societe scientifique de Bruxelles. Annales
Societe scientifique du Dauphine, Bulletin
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Studia botaniska cechslovaka. Cesk. bot. spol.
Studia historica Hungarian academy of sciences.
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Svenska vetenskapsakademien. Stockholm. Arsbok. Handlingar. Levnadsteckningar. Skrifter i naturskyddsorebden.
Sweden. Sveriges geologiska undersokning. Arsbok
Symbolae botanicae Upsalienses.
Syracuse university, New York. State college of forestry. Roosevelt wild life forest exp. station. Bulletin

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Tohoku mathematical journal.
Tokyo. Keio gijuki univ. Faculty of engineering. Proceedings
Tokyo. Scientific research institute. Journal.
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Torreia U. of Havana
Tufts college Joint UW exchange

Tulane studies in zoology
Turin. University. Istituto e museuo do zoologia. Bollettino

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U.S. Department of Agriculture. Joint UW exchange
U.S. Fish and wildlife service. Joint UW exchange
U.S. Geological survey. Joint UW exchange
Uppsala, Sweden. University. Arrskrift
Utah academy of sciences, arts and letters. Proceedings
Urawa. Saitama university. Science reports. Series A, B

Vereeniging indische institut, Amsterdam. Jaarsverlag
Vereeniging voor terpenonderzoek. Jaar verslag
Verein der freunde der naturgeschichte in Mecklehnberg, Rostock.
Archiv
Verein fur geschichte und naturgeschichte der boar und er angsezenden landesteile, Donaueschingen.
Verein fur naturkunde, Mannheim. Jahresbericht
Verein fur naturwissenschaft und mathematik in Ulm aD. Mitteilungen
Verein fur naturwissenschaftliche heimatforschung zu Hamburg. Verhandlungen
Verein fur vaterlandische-naturkunde in Wurttemburg. Jahreshefte
Verein zur verbreitung naturwissenschaftlicher kenntnisse, Vienna. Schriften
Vermont. University. Joint UW exchange
Vetenskaps societeten i Upsala. Nova acta Arsbok
Victoria. Australia. Public library, museums and national gallery
National museum. Memoirs
Victoria university college, Wellington, N.Z. Zoology publications
Victoria naturalist
Vienna. Naturhistorisches museums. Annalen
Virginia journal of science. New series.
Vlaamse academie voor wetenschappen, letteren en schone kunsten van Belgie. Jaarboel Klasse der schone kunsten. Verhandeling Klasse der wetenschappen. Verslagen en voorstellen.

Wagner free institute of science of Philadelphia. Bulletin
Warsaw. Panstowe museum zoologizne. Acta ornithogica
Washington. University. Joint UW exchange
West Virginia academy of science. Proceedings
Wisconsin conservation department. Joint UW exchange
Woods Hole. Oceanographic institution. Collected reprints

Yale University. Peabody museum of natural history.
Bingham oceanographic foundations. Bulletin
Yorkshire geological society. Proceedings
Yorkshire philosphical society. Annual report

Ziemi staropolski. Instytut zachodni, Poznan, Poland
Zoologisch-botanische gesellschaft in Wien. Verhandlungen

REPORT FROM THE SECRETARY

By R. J. Dicke, Secy.-Treas.

MEMBERSHIP

Since the last issue of the Review, applications for 14 new memberships have been received. It is a pleasure to welcome the following members:

Sustaining: JAMES R. HABECK, Univ. of Wis.
Active: PETER ABRAMOFF, Marquette University
LAWRENCE S. BREY, St. Rose of Lima, Milwaukee
R. J. COLBERT, Univ. of Wisconsin
MURL DEUSING, Milwaukee Public Museum
HUGH H. ILTIS, Univ. of Wisconsin
FREDERICK M. LOGAN, Univ. of Wisconsin
DOUGLAS G. MARSHALL, Univ. of Wisconsin
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D. JOHN O'DONNELL, Wis. Cons. Dept. (renewal
JOSEPH PALMERI, Univ. of Wisconsin
PHIL SANDER, Simmons Co., Kenosha
HERBERT A. VANDER BLOEMEN, WCD, Manitowoc
JESSE V. WILLIAMS, Jr., Univ. of Wisconsin
WARREN J. WISBY, Univ. of Wisconsin
Library: WISCONSIN STATE COLLEGE, La Crosse

To date, our membership is as follows:

Patron	3	Active	560		
Life	32	Corresponding	3	TOTAL	620
Sustaining	7	Library	15		

There is a high membership potential within this state, and although we have increased our membership considerably in the past several years, we must continue our efforts to contact our colleagues and friends and urge their support of the Academy.

Word has been received from ALLAN F. REITH, Chief Bacteriologist of the Jos. Schlitz Brewing Company of Milwaukee, that he has retired from active work as of December 1, 1955. He is moving to California and is therefore dropping his affiliation with the Wisconsin Academy, which has been continuous since 1929.

TRANSACTIONS

On December 27, composition of Volume 44 was underway, and the issue should go to press during the first week in January. It is our plan to mail copies to the membership during the month of January. Copies will not be mailed to our exchange libraries until all of the membership copies have been issued.

Manuscripts for Volume 45 are being received. Date of submission of course will be one of the considerations for acceptance for publication in this issue.

An Editor for the TRANSACTIONS is being considered by the Council, and it is hoped that the new Editor and his committee will be able to publish Volume 45 sometime in July or August.

# # #

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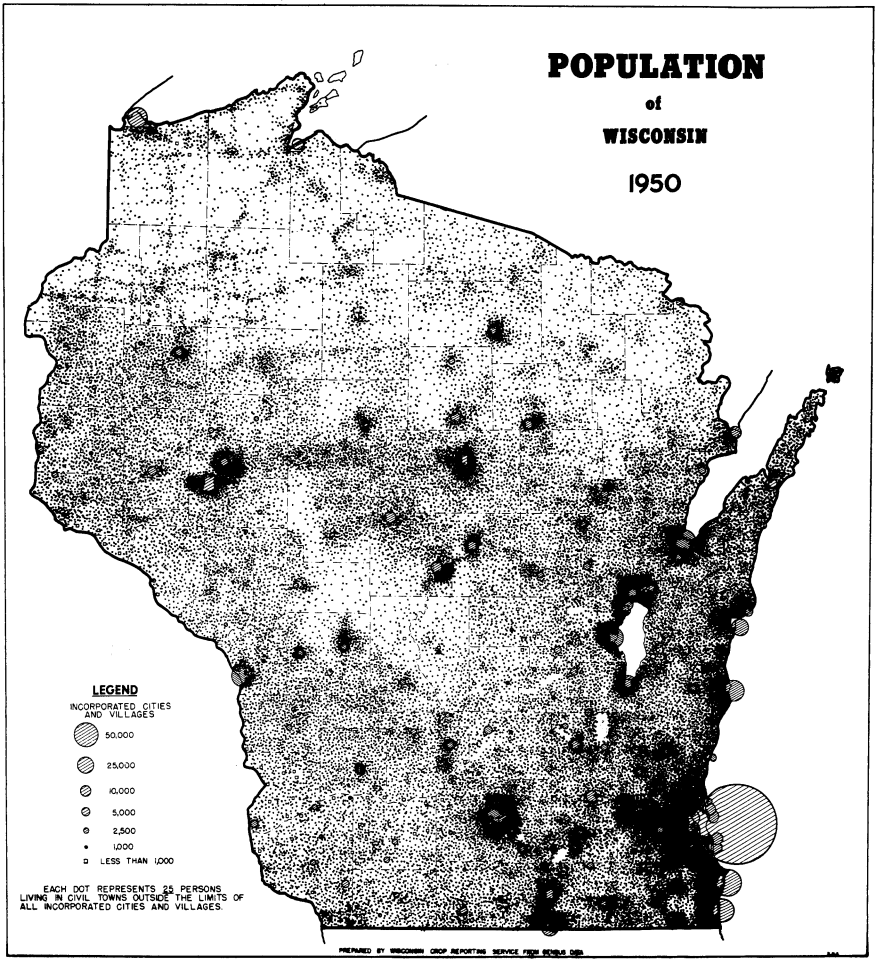

Over a 50-year period the population of Wisconsin grew from 2,069,042 in 1900 to 3,434,575 in 1950. The uneven distribution of the population is quite evident with the major change occurring in the urban territories of the state. Since 1900 the number of people in the urban areas more than doubled while the rural population increased by only a fourth. During this period the number of census-designated urban places increased from 61 to 105. -- (From "Wisconsin Agriculture in Mid-Century," Bulletin 325 - Wisconsin Crop Reporting Service.)