



LIBRARIES

UNIVERSITY OF WISCONSIN-MADISON

Wisconsin Academy review. Volume 3, Number 2 Spring 1956

Madison, Wisconsin: Wisconsin Academy of Sciences, Arts and Letters, Spring 1956

<https://digital.library.wisc.edu/1711.dl/M7VWMQPYN447R8P>

<http://rightsstatements.org/vocab/InC/1.0/>

The libraries provide public access to a wide range of material, including online exhibits, digitized collections, archival finding aids, our catalog, online articles, and a growing range of materials in many media.

When possible, we provide rights information in catalog records, finding aids, and other metadata that accompanies collections or items. However, it is always the user's obligation to evaluate copyright and rights issues in light of their own use.

WISCONSIN ACADEMY REVIEW

SPRING, 1956



PUBLISHED QUARTERLY BY THE

WISCONSIN ACADEMY OF SCIENCES, ARTS AND LETTERS

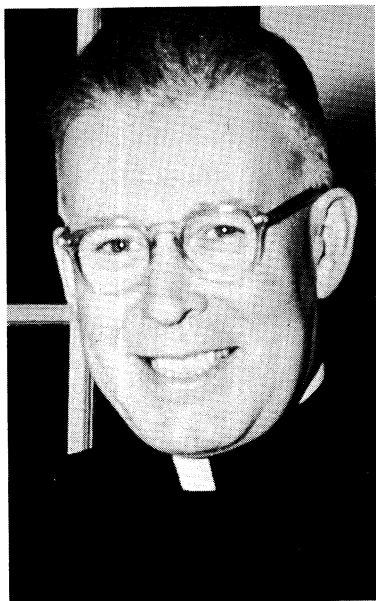


MARQUETTE UNIVERSITY'S 75th ANNIVERSARY

By Miss Ann Grattan
Marquette News Bureau

Marquette University will be host to the 86th annual meeting of the Wisconsin Academy of Sciences, Arts and Letters on May 4-5 as part of the University's 75th anniversary celebration. Marquette is in the midst of a year-long academic celebration of its anniversary which has brought scholars from many fields to its campus for a series of conferences.

During this anniversary, its Jesuit administrators remember their predecessors who accepted the invitation of Milwaukee's first bishop, John Martin Henni, to open a college there.



Bishop Henni collected funds in Europe for the proposed college, investing \$11,000 in property at Tenth and State streets in 1856. The college was chartered during the Civil War, but building was delayed until 1880.

The Jesuit college he had planned became a reality just two days before his death in 1881. Marquette College opened that fall to students of all creeds and continued at that location until the turn of the century.

Very Rev. Edw. J. O'Donnell, SJ
Pres., Marquette University

The move to Wisconsin
avenue began in 1893
when the stately spires

of the Church of Gesu rose at N. 12th street and West Wisconsin avenue. In 1907 Marquette College became a university and established headquarters in Johnston Hall next to Gesu. In 1924 the tower of the Science building went skyward at N. 13th street, and the Law building, at the corner of N. 11th street. From this cluster of "lower campus" buildings, the University has expanded to include 41 buildings with facilities for its 10 schools and colleges.

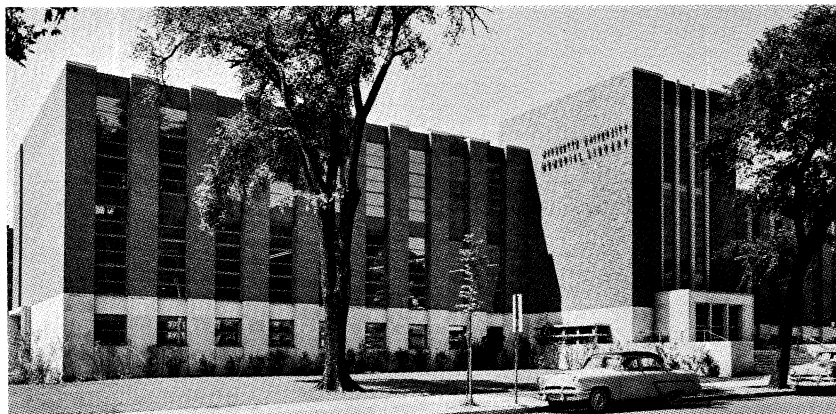
The small college of less than a hundred students has grown into one of America's major educational institutions providing more than 9,000 men and women with courses of study in business administration, dental hygiene, dentistry, engineering, journalism, law, liberal arts, medicine, medical technology, nursing, physical therapy, education, speech and graduate studies.

The Very Rev. Edward J. O'Donnell, S.J., has guided the growing university through the postwar years. In response to recent demands upon the University, seven million dollars has been spent on construction of a college of business administration, a women's residence hall, student union building, a library, and a medical school wing for the medical library. As the momentum gains in the development program, ground will be broken for a new men's residence hall, a dental school addition, a science hall and a communications' building for speech and journalism.

Research projects in medicine and dentistry and in the college of liberal arts have won the approval and support of such groups as the American Cancer Society, the Atomic Energy Commission, the Wisconsin Heart Association and the United States Public Health Service. Faculty members and graduate students reported more than 100 research projects underway last year. Permanent centers for research at Marquette include the Bureau of Business and Economic Research, a service to business and industry, and the Institute of the Catholic Press, a research division of Marquette's college of journalism.

From the start, Marquette has been conscious of its responsibility to the city and the state and has expanded its curriculum and services to meet community needs. Night courses are outlined in cooperation with local firms, and cooperative programs with midwest industries provide working experience for business and engineering students. Clinical services of the Dental school, the School of Speech and the School of Medicine are available to the community. More than 40,000 visits are made annually to the dental clinic, and speech correction services are offered adults, children and pre-school youngsters.

Marquette's endowment totals less than \$3,000,000, unless one considers its "endowment of men," the 60 members of the Society of Jesus who serve as administrators and teachers without financial compensation. Marquette's faculty and staff includes more than 900 laymen. More than 200 physicians serve as part time members of the medical faculty without remuneration, as also do many lecturers in business administration. From the start, Marquette has sought to serve the common good in a pursuit of truth by all its members. The University has



Marquette Memorial Library, W. Wisconsin avenue

committed itself to the formation of its students in truth according to their abilities. Marquette seeks as well to enlarge knowledge as possessed by its own teachers, and through teaching and research to help all men grow in truth.

Though the campus has been in a state of change and growth since its very beginnings, the traditions of Marquette University's educational program have been constant to those set down in 1540 by the founder of the Society of Jesus: to provide a system of education which would help men retain their heritage of universal knowledge by guiding them through their first investigation of truth so that they are able to strike out by themselves and lead their lives according to established truths.

###

WISCONSIN FORESTRY INFORMATION --

WOOD HANDBOOK, Handbook No. 72, USDA Forest Service, Forest Products Lab., 1955 (\$2.00), gives the following forestry information for Wisconsin in acres:

- Total Forest Land - 17,000,000
- Total Commercial Forest - 16,265,000
(economic & saw log caliber)
- Old Growth Saw Timber - 125,000
- Young Growth Saw Timber - 1,975,000
- Restocking - 9,075,000
- Poorly stocked and denuded - 5,090,000
(lands not in any previous class)
- Reserved for parks - 86,000
- Non-commercial forests - 649,000
(land chiefly valuable for purposes other than timber production - watershed, soil erosion control, wildlife).

A PHOTOGRAPHER GOES HUNTING

By R. W. Poulter
Horicon, Wisconsin

Photographing wildlife is always great sport, especially so on the Horicon Marsh where 30,000 acres literally teem with life and there is always a subject waiting to be captured by the lens. Few areas in the United States offer such a great concentration of bird and other life throughout the twelve months of the year as does this marsh located in southeast Wisconsin.


The hunter with his gun chooses a blind and shoots when his prey unwittingly comes close. But there is little thrill for one who knows and loves wildlife to "shoot" from under cover. So I set out to learn just how to approach birds, particularly the Canada Goose, without the use of any sort of blind. Even with the aid of telephoto lenses one still must move in close to get good pictures.

While watching a large flock of Canada geese one day in October I noticed five cows grazing in the same field. The geese seemed unaware and certainly unafraid of them. Figuring that this might be an opportunity to approach without attracting attention, I gathered up all the necessary equipment, joined the friendly cows, and we were off. Have you ever really taken a walk with cattle as they graze and move about in a pasture? If not, try it sometime for an hour or so and you will know what the term "slow motion" really means.

We (the cows and I) moved in many directions and finally came within throwing distance of the geese. A new situation now arose. Could I leave my walking blind and still not frighten the birds? The answer came when I found myself standing in the open pasture, alone, with hundreds of geese. It was a big thrill to be so close and still not create too much concern. It seemed evident that it would be important to continue the slow movement and keep my eyes off any particular group of geese. There have been many occasions since to bear out the fact that wildlife watch one's eyes very closely.

In every flock there are always a few sentinels on guard that stand with heads erect and eyes fairly frozen on you. As you move in too close and other heads raise,

Canada geese on Horicon marsh, photographed by Poulter
after a successful stalk





it is wise to turn and angle away. After they settle again it may be possible to approach even closer than before.

When there are no cattle to lend assistance it is necessary to start out in full view at a distance far enough away so they will not become frightened. Geese usually pick the open spaces where there is little chance for intruders to approach under cover. It may take more than an hour to meander close in but one must not forget the to-and-fro movement he learned on his first lesson with the cows as teachers.

Not every venture is successful from the standpoint of getting in close to the birds but every time one does feel that he has learned a little more about stalking geese. The fall flight has consistently seemed less wary than the spring flight, even with the hunters shooting all around the refuge.

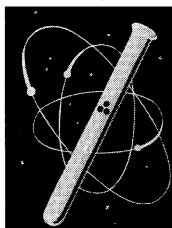
This technique has been used mostly on the majestic Canada geese but successful approaches have been made on ducks and sandhill crane. On one occasion I was even able to make friends with the sora and Virginia rail to the point where they ran between the legs of the tripod.

These are unforgettable experiences and while the picture record is nice to have, the satisfaction of walking and talking with the birds is the big pay-off. It would seem that color of clothing and equipment carried have little effect, and judging from experience in stalking wildlife for several years, it seems quite evident that it is not so much what you are, but how you act that counts.

#

SUCCESS STORY -

Junior Academy leader JOHN W. THOMSON, Jr. told the Senior Academy Council a "success story" at their recent meeting. It was about talented GENE UEHLING of La Crosse, who was discovered through the Science Talent Search, and whose article on transistor circuits appears in this issue. Senior Academy officers, with the help of the Scholarship Committee of the Engineers' Society of Milwaukee, secured a part time position for Gene at the Allen-Bradley Company to help him earn his way through college. The company has indicated they are so pleased with his ability that he is virtually assured of a continuous position while continuing his studies in Milwaukee.



SOUTHEASTERN WISCONSIN SCIENCE FAIR

By Rev. L. W. Friedrich, S.J.
Chairman, Executive Committee
Southeastern Wisconsin Science Fair

A Science Fair is a display of exhibits prepared by high school students covering the whole gamut of areas in the biological sciences, the physical sciences, mathematics, conservation, medicine, and engineering. Science Fairs have succeeded in surrounding the public display of scientific work done by high school students with an atmosphere that delights and stimulates the teenager. They capitalize on the teenager's desire for legitimate recognition for work conscientiously and well performed, and spice it all with a spirit of competition.

Science Fairs discover creative ability in science and help to counteract the steady decline of high school student interest in the sciences and mathematics that has been occurring during the past half century.

Early in 1954, representatives of Marquette University met with Courtland Conlee, Promotion Manager of The Milwaukee Journal, to discuss the feasibility of a Milwaukee area Science Fair co-sponsored by the Journal and Marquette University. What came out of that meeting is now history. The Second Annual Southeastern Wisconsin Science Fair ended on April 15. There was a substantial increase in the number of students, and schools, participating in this second Fair over that of the first. The number of exhibits appearing at the Fair from any one school is, in some cases, only mildly indicative of the science activity in the school since only the winners of a school-conducted Fair participate in the Southeastern Wisconsin Fair. (Typical exhibits are shown in the illustrations accompanying this article.)

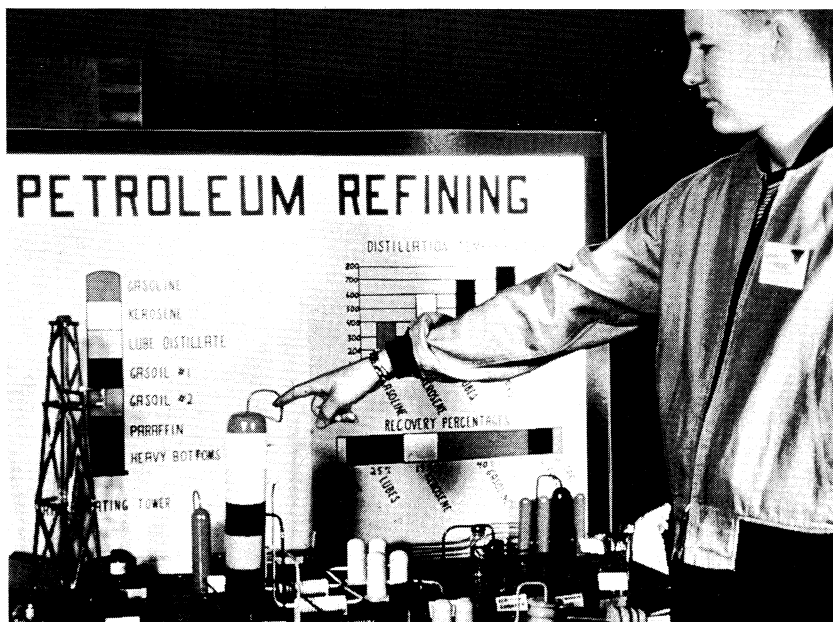
There is an advantage in having a newspaper-university partnership sponsoring a Fair. A newspaper, such as The Milwaukee Journal, has the "know-how" to provide attractive and effective promotion litera-



ture. The Milwaukee Journal prints Science Fair stories periodically to keep both the schools and the general public interested in the Fair. The Journal has also been very generous in providing financial assistance for the Fair. The co-sponsoring university can provide the facilities and services necessary for displaying the Science Fair exhibits. It has the trained science personnel who can advise both the high school teachers and students in science projects and it can provide the people to judge the exhibits. The total cost of the Annual South-eastern Wisconsin Fair, not counting time donated by Marquette University faculty and Journal personnel, is about \$3,000.

The Fair has attracted the interest of the Engineers' Society of Milwaukee, the American Chemical Society, the Medical Society of Milwaukee County, and the various scientific organizations on the University campus. The members of these societies have been very helpful in counseling students in their exhibit preparations and in providing judges and special awards.

The top award of the Fair is a \$500 scholarship to Marquette University given to the highest scoring senior. Expense paid trips to the National Fair, which will be held this year at Oklahoma City on May 10, 11, 12, are awarded to the highest scoring boy and girl exhibitor. There are twenty lesser awards ranging from fifty dollar



bonds to five dollar certificates. Besides these awards, provided by the co-sponsors of the Fair, there are other special awards provided by others.

In 1956, the Southeastern Wisconsin Science Fair was opened to the whole State of Wisconsin. It is hoped that this can be discontinued soon. Since but two winners per regional Fair may enter the National Science Fair, and Wisconsin now has just one such Fair, only two exhibitors represent Wisconsin at the National Fair. Many other states are doing considerably better. As an example--every college, except one (which teaches no science courses), in West Virginia conducted a Science Fair in 1956. Obviously, Wisconsin is presently at a disadvantage in the National Science Fair.

#

WISCONSIN OAK TRACT ---

The following statement is quoted completely as it appeared in the March, 1956 issue of Nature Conservation News, published by the Nature Conservancy (4200 - 22nd street NE, Washington, 18, D.C.):

"A 13 acre tract of prairie and 'oak opening' in southwestern Wisconsin is being acquired for preservation through the efforts of a special committee headed by Dr. JOHN T. CURTIS, Department of Botany, University of Wisconsin.

"The tract is on a limestone hill in the Driftless Area. The west side of the hill contains a small oak opening, or grove of open grown oak trees. The original trees remain intact as magnificent big trees 8-10 feet in circumference, as does a portion of the original prairie herbaceous flora. On the top of the hill new growth from grubs and saplings is beginning to fill in between the open-grown oaks while on the east side of the hill this filling process has continued to the point where there is a closed-canopy forest. The tract thus exhibits the complete transition from oak opening to oak forest.

"The area is adjacent to a tract held by the University of Wisconsin Astronomy Department. If funds for its acquisition can be raised, it is anticipated management can be arranged between the Arboretum Committee and the Astronomy Department. Thus far, about \$1,500 of the \$2,000 necessary for the purchase is available. Contributions toward the remaining \$500 are needed."

- - -

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

SNOW FLEAS — INTERESTING FELLOWS

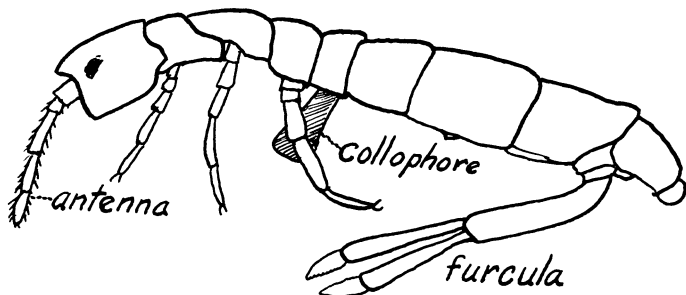
By C. L. Fluke
Dept. of Entomology, UW

Snow fleas are spring tails, tiny insects which are provided with a "spring board," called a furcula because it is a forked tail. With this structure they are able to jump and since one of them will often appear in the winter on the snow, it is called a snow flea. It was named Achorutes nivivulus by Fitch.

There are many kinds of spring tails and they are very numerous but because of their minute size, they are seldom noticed. We are often lead to believe that ants are the most numerous of insects (the farmer will dispute this) but almost any soil, especially grassland or woodland soil, will contain many of these insects. A few years ago one of my students made a study of the fauna of certain orchard soils and the preponderous numbers of spring tails found almost make us believe that these tiny forms are more numerous, at least in Wisconsin, than are the ever-present ants.

These insects also have another interesting structure on their abdomens. It is a tubelike process, called the collophore, and is located on the ventral side of the first abdominal segment. At the apex of the collophore is a bilobed eversible secretory vesicle which enables the insects to stick to slippery surfaces or perhaps it acts as a non-skid process in the act of jumping.

Sometimes spring tails appear in enormous numbers on the surfaces of fresh water pools, especially on the sidewalks after a rain shower. They feed on decaying animal or vegetable matter, fungi, or sometimes on tender plant tissue. Housewives often find them on the surface of the soil of their potted plants. The most interesting of them all, however, is the one that can hop around on the snow, even when it is quite cold. Maple sap gatherers are well acquainted with them as they are often a nuisance in the sap buckets.



COORDINATING COMMITTEE FOR HIGHER EDUCATION



COORDINATING COMMITTEE PHOTO (By Gary Schulz): Seated, left to right: Messrs. MURPHY, STEIGER, WATSON, Governor KOHLER, GELATT, WERNER and Mrs. LAIRD. Standing, left to right: Messrs. MASTERSON, MAGNUSON, BARSTOW, WEGNER, DELZELL, RENK, TRACY, RASEY, and McINTYRE. Gov. Kohler welcomed the committee at this organization meeting.

This photograph shows the members of Wisconsin's new Coordinating Committee for Higher Education Planning at their first meeting on January 5. Representatives elected by the University of Wisconsin Board of Regents are Helen C. Laird (Marshfield), Wilbur N. Renk (Sun Prairie), Charles E. Steiger (Oshkosh) and A. Matt Werner (Sheboygan). Charles D. Gelatt (La Crosse) is also automatically a committee member as University Regent President. Regents of the State Colleges on this joint committee are E. W. Murphy (La Crosse), R. C. Magnusen (Oshkosh), Wilson S. Delzell (Stevens Point), Barney B. Barstow (Superior) and Board President W. D. McIntyre (Eau Claire). Members appointed by Governor Walter J. Kohler are Arthur E. Wegner (Madison), Robert Tracy (Janesville), Norton E. Masterson (Stevens Point) and Lee Rasey (Milwaukee). G. E. Watson, Superintendent of Public Instruction, is automatically a member of the committee.

One of the primary functions of this committee was to assist in the merger of the Wisconsin State College and University Extension at Milwaukee. The committee has agreed on an opening date of September 1, 1956 for the new "University of Wisconsin at Milwaukee." They are also charged with determining "what over-all educational programs shall be offered in the several units of the University and the state colleges to avoid unnecessary duplication," and other matters. # # #



THE OLD-SQUAW DUCK ON LAKE MICHIGAN

By Robert S. Ellarson

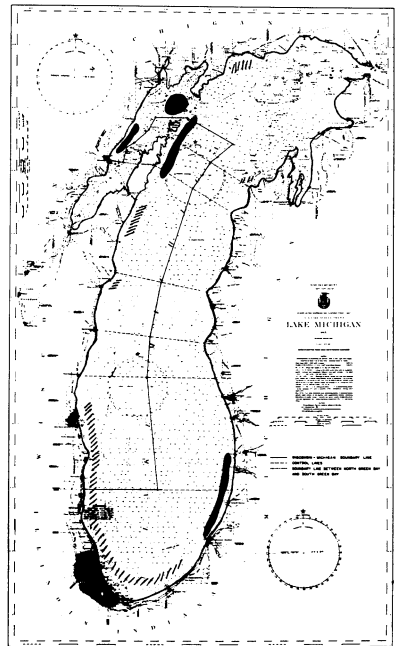
Dept. of Forestry & Wildlife Management, UW



The Old-squaw Duck is a breeding bird of the Arctic tundra and Arctic islands of the far North. It is an extremely hardy bird which migrates south only far enough to find open water during the winters. The three principal North American wintering grounds of the species are along the Pacific Coast of Alaska and Canada, the northern one-third of the Atlantic Coast of the United States and in the interior of North America on the Great Lakes. This duck is certainly one of the most numerous birds to be found on Lake Michigan from November through March, yet it is surprising how few people in our state have ever heard of it, much less have ever seen it. This stems from the fact that the Old-squaw is a bird that shuns small bodies of water such as the inland lakes and streams of Wisconsin and lives exclusively on very large lakes and the oceans during the nonbreeding season.

The Old-squaw Duck feeds on minute forms of animal life which are found on the lake bottom. These birds are capable of feeding in water as deep as 180 feet but normally do most of their feeding in depths ranging from 60 to 120 feet.

The isolated breeding range and wintering grounds of this bird would lead one to believe that here was a species safe from any interference by man; this, however is not the case. The deep-diving habits of the bird results in thousands perishing each year by becoming entangled in fishermen's gill nets set for taking fish. This bizzare form of bird mortality has interested ornithologists for many years, and the ornithological literature contains



many scattered accounts of such occurrences. However, no one had attempted to assess the extent of these losses or to determine all of the contributing factors. Therefore, in 1951 a research project was begun under the auspices of the Department of Forestry and Wildlife Management at the University of Wisconsin to investigate these problems. Work was confined to Lake Michigan, as this lake appeared to be the principal one on which this type of mortality occurs. It might be expected, though, wherever shoal-water gill-net fishing is practiced on the Great Lakes.

The work consisted of two major parts: an evaluation of the annual mortality to diving birds and the factors contributing to this mortality, while the second portion of the work was devoted to a study of the biology of the Old-squaw Duck.

A number of species of birds were found to be taken in gill nets, but of over 9,000 specimens examined, almost 99 per cent were Old-squaw Ducks, the remainder was made up of four other species of ducks, two species of loons, and two species of grebes.

The areas of Lake Michigan where the greatest mortality occurs coincides with those areas supporting a winter and early spring whitefish fishery since the greatest mortality occurs in the large mesh nets used for the taking of whitefish. The investigation has shown that over twice as many birds are taken in large mesh nets as are taken in the smaller mesh sizes fished in the same waters.

The accompanying map shows the areas in which winter and early spring gill netting is done for whitefish. Areas shown in black are those of greatest bird mortality. Lesser duck mortality occurs in the cross-hatched areas along the western shore and occurs principally in small mesh nets.

Estimates of annual mortality for Lake Michigan for the winter and spring seasons of 1951-52 and 1952-53 were obtained by interviewing gill-net fishermen in all of the ports on Lake Michigan. The estimates obtained for these two years were 17,000 and 21,000 ducks respectively. These figures are deceptively low because both of those years were years of minimal duck catches resulting from mild winters with little ice formation on the lakes, and also because of poor fishing which resulted in fewer nets being set. The winters of 1949-50 and 1950-51 on the other hand, were quite severe and while it was impossible to estimate accurately the duck mortality, the information available indicates that gill-net mortality was in the



vicinity of 100,000 birds for each of these two years. The accompanying photograph shows a pile of 2,589 Old-squaw taken during the last two weeks of March 1951 by a single fisherman at Saugatuck, Michigan.

In spite of the startling number of these birds taken annually, their numbers do not seem to have decreased appreciably, and with the current decline in both lake trout and whitefish fishing, it is doubtful if the present catches of Old-squaw Ducks constitute a serious threat to the species.

There appears to be no solution to the problem short of stopping all shallow-water gill-net fishing while the birds are present on the lake which, of course, is an impossibility. The future of this interesting bird is therefore inextricably tied to the fortunes of the gill-net fishermen. An increase in the trout and whitefish populations will affect the birds adversely while a continuation of the present decline of these fish will be to the birds' benefit.

#

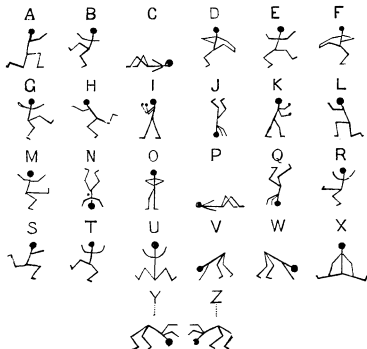
ANSWERS TO RIDDLE

SOMETHING NEW: THE LANGUAGE OF THE RESTLESS IMPS.—

Little drops of water,
Little grains of sand,
Make the mighty ocean,
And the beautiful land.

Little acts of kindness,
Little deeds of love,
Make this world an Eden,
Like the Heaven above.

Below is given the alphabet of the language of the Restless Imps:



LANGUAGE OF THE RESTLESS IMPS

Verses appearing in the Winter, 1956 issue of the Review, p. 1-4, using the Language of the Restless Imps are deciphered herewith, together with complete alphabet of figures. (from St. Nicholas magazine, June, 1874.)

UNIVERSITY EXTENSION COMES OF AGE

By L. H. Adolfson, Director
University of Wisconsin Extension Division

The modern American university typically is dedicated to the ideals of three great American educational traditions: that of the colonial college, with its emphasis on humane learning and responsible citizenship; that of the land-grant college, devoted to the democratization of learning and the application of intelligence to everyday pursuits in agriculture, industry, and homemaking; and

that of the state university, serving all the people of its constituency. Hence American universities have come to describe themselves as being engaged primarily in the three general functions of teaching, research, and public service.



To carry on the public service function, most American universities have a general extension division, often operating under some other name, and land-grant colleges have agricultural extension services as well. Actually, however, adult educational and public service activities are now in all universities carried on by a wide range of departments, particularly those which offer training for the professions. Most universities also have some special facilities, such as a radio studio or a press,

under administrative supervision other than that provided by the general extension division.

The University of Wisconsin is asked to make its resources in personnel and facilities available to individual citizens and groups of citizens of all ages, in all walks of life, in all areas of the state. These services extend from education through correspondence or home study, radio, extension classes, and institutes to soils testing, geological surveys, health and hygienic laboratory testing, special medical services, home demonstrations, artists in residence, and consulting services of many types.

A primary vehicle for projecting University resources to the general public is the University Extension Division.

1906-1956

The Jubilee Resolution

WHEREAS, The year 1956 will mark the 50th anniversary of the University of Wisconsin Extension Division, and

WHEREAS, The organization of the Wisconsin Extension Division was the formal birth of the famous Wisconsin Idea of general educational public service throughout the state, and a great impetus to the growth of the general extension concept in America, and

WHEREAS, Today, no less than half a century ago, the University of Wisconsin's broad program of public service is generally considered to be an outstanding example of extension in action,

THEREFORE, The Regents of the University of Wisconsin:

(1) Reaffirm the traditional belief of this institution in the high value and importance of broadly conceived and vigorously discharged educational extension programs, and

(2) Designate the period of February through August, 1956, as the Golden Jubilee of Wisconsin Extension, to be observed by a suitable program of commemorative projects and events which will pay tribute to the pioneers of yesterday, face the opportunities of today, and look forward to the challenges of tomorrow.

THE BOARD OF REGENTS OF THE
UNIVERSITY OF WISCONSIN
July, 1955

50 years

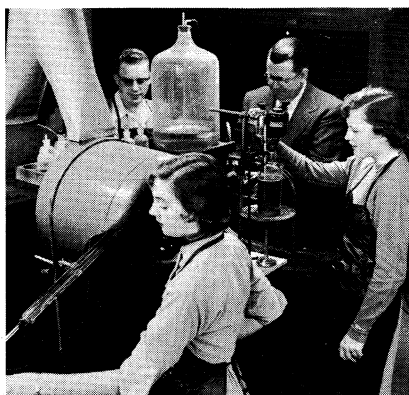
two broad types of educational services: formal instructional programs, and special services.

The formal programs include extension centers, a wide range of special classes, and correspondence study.

The special service programs of the Division can again be divided into broad groups. First, there is the wide range of institute and short-course programs that constitute a major phase of University adult education activities. These courses are tailored to meet the specific needs of professional and functional groups in our state.

Organized in 1906 as a pioneering venture, the UW Extension Division is today one of the largest organizations of its kind in the United States. The broad philosophy of "extension" at Wisconsin is to make the University an integral and dynamic part of the life of the state in every way possible within the limits of available resources. To achieve this broad goal the Extension Division works in close co-operation, first, with most University colleges, schools, and departments so that Extension programs will be rooted in the basic teaching and research of the campus; second, with a wide range of public and private agencies in the state so that programs will supply the genuine needs and desires of Wisconsin citizens in the most practical way possible.

Within the framework of these general policies, the Extension Division provides



Laboratory, Green Bay
Extension Center

The second special service activity consists of programs developed for individuals, groups, and communities in the state through a package library, the Wisconsin Idea Theatre, and the Bureaus of Audio-Visual Instruction, Community Development, and Lectures and Concerts.

In total, these activities reach literally into every corner of the state and serve thousands of Wisconsin citizens.

Growing out of the same aspirations which fostered the Wisconsin Academy of Sciences, Arts and Letters, the University Extension Division is today, on the occasion of its 50th anniversary, pledged to carrying forward those aspirations to the end that it can be of even greater service, in its second half-century, to the people of the state, the nation, and the world.

#

A NOTE ON THE COVER PAINTING

Because he says that good paintings of a vertical nature are hard to find these days, our art editor contributes one of his own works for the cover of this issue of the Academy Review.

Entitled "LIZARD," Aaron Bohrod's painting invades the natural sciences for its subject matter. Against an old mildewed sheet of steel engraved and hand colored amphibians rests a chunk of driftwood stuck with many colored mother-of-pearl hatpins, possibly echoing the spikiness of the animal of his title. What else the artist may have in mind he doesn't say, except that among his aims in painting he does say are "to paint in a way that the spectator may himself approach an understanding of the work, and, if possible, to paint beautifully."

"LIZARD" is currently in the artist's one-man exhibition at the Detroit Institute of Arts. From that show the Detroit museum has announced that it has acquired one of Bohrod's large and important still life works, "GEORGIC," for its permanent collection.

--- The Editor



THE BOOKSHELF

A HALF CENTURY OF CHANGE IN BIRD POPULATIONS OF THE LOWER CHIPPEWA RIVER, WISCONSIN

By Irven O. Buss and Helmer M. Mattison

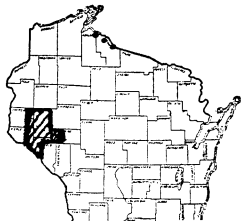
Milwaukee Public Museum

Publications in Ornithology,
No. 1 (1955) - \$5.00

The authors have shown where possible the changes in the avifauna of the area since the work of J. N. Clark at Meridean between the years 1886 and 1901. Nearly all of Clark's work was done in the immediate vicinity of Meridean, while the investigations of the authors covered all of Dunn and Pepin counties, and parts of St. Croix, Pierce, and Eal Claire counties. Owing to the smallness of the area covered by Clark and his comparatively limited data, it would be difficult to point out marked changes in the populations of many species.

The paper contains detailed information on sight records and specimens collected, and considerable data on nesting. An idea of the comprehensiveness of the work may be gained from the fact that data are given on 520 specimens of birds, and that approximately 1200 nests of 98 species of birds were examined. Most of the various state bird books are content with giving nesting information taken from handbooks covering a large section of the United States, and not known to be applicable to the particular state or area within the state; hence the breeding data are particularly valuable.

The probable subspecies is indicated where definite information on the race is lacking. While some of the breeding specimens of the red-winged blackbird taken in the state correspond in measurements to arctolegus, it remains doubtful if this subspecies is more than a migrant and winter resident. The uncertainty regarding the status of the horned larks could have been resolved by taking specimens from flocks, particularly in January. Wintering prairie horned larks are usually seen only as singles or pairs and the same condition obtains on their return in February. Large flocks during the winter months should consist largely of alpestris or hoyti, or both.



This significant statement regarding Wilson's snipe is made: "We have noticed no appreciable change in the number of Wilson snipe occurring in Dunn County since the hunting season was closed in 1941." The same can be said of the more southern counties, and an open season on this shorebird is ill-advised.

← Map: Location of the lower Chippewa river area.

The information on upland game birds and waterfowl is especially full. For many species of waterfowl curves are given showing the numbers seen throughout the spring migration. There is also interesting information on kills and crippling losses of waterfowl at Lake Pepin and in Dunn county.

This publication, nicely printed, is an excellent contribution to the ornithology of Wisconsin.

-- A. W. Schorger

HOW TO FISH FROM TOP TO BOTTOM

By Sid W. Gordon

Stackpole Company
Cameron & Kelker sts.
Harrisburg, Pa. 1955 - \$5.00

How to "read water"--an angling secret known to few--can be done as easily as reading a book, says the author, and in an interesting, simple fashion, he tells how it can be accomplished. He classifies waters as to hardness and color and tells why fish can be found in abundance in some waters and not in others. He explains why fishermen frequently go home empty handed from lakes or streams teeming with fish. He discusses fertility of water, clarity, vegetation and organic life as factors in successful fishing and describes the various appropriate lures and how to use them.

Gordon discusses wet fly, dry fly and nymph fishing and introduces another unique note by explaining the use and makeup of what he calls the set-dry fly. Chapters on trout, bass, muskies, northern and wall-eyed pike are replete with interesting data.

He tells how to choose tackle and how to cast and explains the intricacies of fly tying. The book concludes with chapters on stream and lake improvement, why such improvement is necessary and how to go about accomplishing it. The book should be in the library of every enthusiastic angler, be he expert or novice, for both will profit.

(Reprint of portion of a review appearing in Oshkosh Northwestern November 11, 1955. By permission.)

#

MISCELLANEOUS BOOKLETS AND LEAFLETS

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

"The Biology and Ecology of the Red-Headed Pine Sawfly," by DANIEL M. BENJAMIN. Tech. Bull. 1118, USDA Forest Service
"Forest Management Lessons from a 1949 Windstorm in Northern Wisconsin and Upper Michigan," by J. H. STOECKELER & CARL ARBOGAST, Jr. Lake States For. Exp. Sta. Paper no. 34, Sept. 1955
"Uranium Prospecting in Wisconsin," by GEORGE F. HANSON. Wis. Geological Survey Information Circ. No. 2

UW Forestry Research Notes by R. D. SHENEFELT: "Seasonal Abundance of White Grubs," No. 26; "A Further Note on Protecting Machine Transplanted Trees from White Grubs," No. 25.

"An Economic Survey of St. Croix County," by KENNETH E. RINDT. A community study by UW Ext. Div. Bureau of Community Development.

"Importance of Wood Quality in Tree Breeding," by BENSON H. PAUL. Jour. Forestry, Sept. 1955, Vol. 53, No. 9.

"Fifty Years of Wisconsin Extension," by CLAY SCHOENFELD in School and Society, March 1956; "Surface Indications of a Possible Early Archaic Camp-site in Wisconsin," by ROBERT NERO; and "Indians in an Urban Situation," by ROBERT RITZENTHALER and MARY SELLERS in The Wisconsin Archeologist, Dec. 1955.

#



DOMAIN OF LETTERS

The Academy Review welcomes the following article by one of the distinguished Academy members. ROBERT C. POOLEY is Chairman of the Department of Integrated Liberal Studies, University of Wisconsin. HELEN C. SMITH, Academy member from Evansville, has been active in state regional writers' work. Her poetry here given appeared originally in the Summer, 1955, issue of an elite national publication.

CHILDREN'S T-V: PROFIT OR LOSS?

By Robert C. Pooley, Chairman
Dept. of Integrated Liberal Studies, UW

The obvious fascination of the home television set, and the number of hours which many children are giving to its attractions are causing concern to parents and educators. Studies such as those of Professor Paul Witty of Northwestern University show that for the Chicago area some children are devoting as many as six hours a day to television viewing, and the average of the group questioned was three hours. Any activity which consumes so large a fraction of children's time is unquestionably exerting an influence. Is this influence good or bad?

No simple answer can be given because of the many variables involved. But for the great majority of children the influence of T-V appears to be wholesome and for many it is a significant contribution to their education. Granted that there is much "entertainment" which is trash, and some alleged drama in which violence and homicide predominate, these are not what the great majority of children want or seek. Recent studies of children's own interests in television show that what they like best is information: about the world, about science, other young people, about sports and hobbies. They like stories, good stories, about characters and events they have come to know through other sources such as history, current events, and literature presented in the school curriculum.

Human beings learn through experience; in part through direct experience, but in large part by vicarious experience. Traditionally vicarious experience has been transmitted by oral lore and by books. In recent times these sources have been enriched by radio and the motion picture. Now there is television, perhaps the richest medium of them all, because by eye and ear the whole world is opened up to

the viewer. Today's child, before he has shed his baby teeth, has travelled under the ocean and has seen there wonders only now revealed to the most learned savants; he has endured the cold and storms of the Antarctic and the burning heat of the desert with a degree of reality which only the most vivid imagination could create from printed words. He has witnessed the great events of past times as only the few who were actually present could have done, and he witnesses the history of his own times as it occurs.

These are great gains, and the fact that with this richness of experience there is also some trash and dirt should not obscure the real worth of this educational medium. Rather, these gains should serve as the stimulus to every thinking parent to capitalize upon the values of T-V and to exert every pressure to eliminate the worthless or harmful aspects.

There are two approaches to parental control of T-V experience. One is communal, and is aimed at correcting the sources. Through such societies as the Wisconsin Association for Better Radio and Television influence can be brought to bear upon producers and advertisers to create and maintain programs of worthy content and enriching experiences. Such programs as Mr. Wizard, the Micky Mouse Program, the Disneyland Program and others provide on the whole a fund of worthwhile information and harmless amusement. Parents who care can use their united influence to make their endorsement of such programs known. They can work together for state-wide educational television so that the splendid children's programs of WHA-TV, now limited to a brief circle, can be enjoyed by all children of the State of Wisconsin.

The second approach is personal, in the home. It consists of a few simple rules, carefully explained and firmly kept. Television viewing should follow healthful and active outdoor exercise; it should be limited to a reasonable period of time; it must terminate at a proper and fixed bedtime. In addition to maintaining these rules, parents can be alert to the nature of the programs available at children's viewing hours and can exercise a persuasive selection of the programs viewed. On occasion, when a program of special merit is announced, a point can be made of viewing it together as a family, a special event, planned and talked about in advance, shared as an experience, and talked about in retrospect. With such simple cautions and observances, television viewing can share with the school the task of broadening and enriching children's vicarious experiences. (For a composite report with details, see "Children's Reactions to TV - A Fourth Report," by PAUL WITTY, Elementary English, November 1953, pp.444-451).

- - -



ONCE MORE NIGHT SINGS

It comes, intruding earth-bound, fitful sleep.
 While forming dew drops a caressing hand,
 And night songs blend with peace hung heaven-deep,
 The whistling freight appropriates the land.
 Beneath the quiet moon it thunders by
 Drowsing creatures the nightfall bedded down.
 Unmindful of the tired sleeper's sigh,
 It shrills a warning to the waiting town,
 And runs with time a solitary race,
 Unleashes smoke, like moving ebon scroll,
 Till distance swallows its momentous pace
 And miles of midnight mute its far off roll.
 Then country sounds again enchant the ear;
 Once more night sings, low-voiced and cricket-clear!

-- Helen C. Smith

By permission of the Author
 Courtesy of The Country Poet



THE OLDEST STATION IN THE NATION

By Harold A. Engel*



Assistant Director, WHA

"Calling all stations. Calling all stations. This is 9XM calling. 9XM, 9 - X-ray - Mike - at the University of Wisconsin in Madison calling - - -"

At that call many an amateur wireless enthusiast pulled his earphones on more tightly and readjusted the "catwhisker" on the crystal of his homemade receiver. He was hearing radio history in the making, for 9XM was destined to grow into WHA, "the oldest station in the nation."

Wireless broadcasting, like many inventions, is the result of the genius and perseverance of many scientists and experimenters. Wisconsin played an important part in the early history of radio. It is an interesting chapter in a story which is still unfolding.

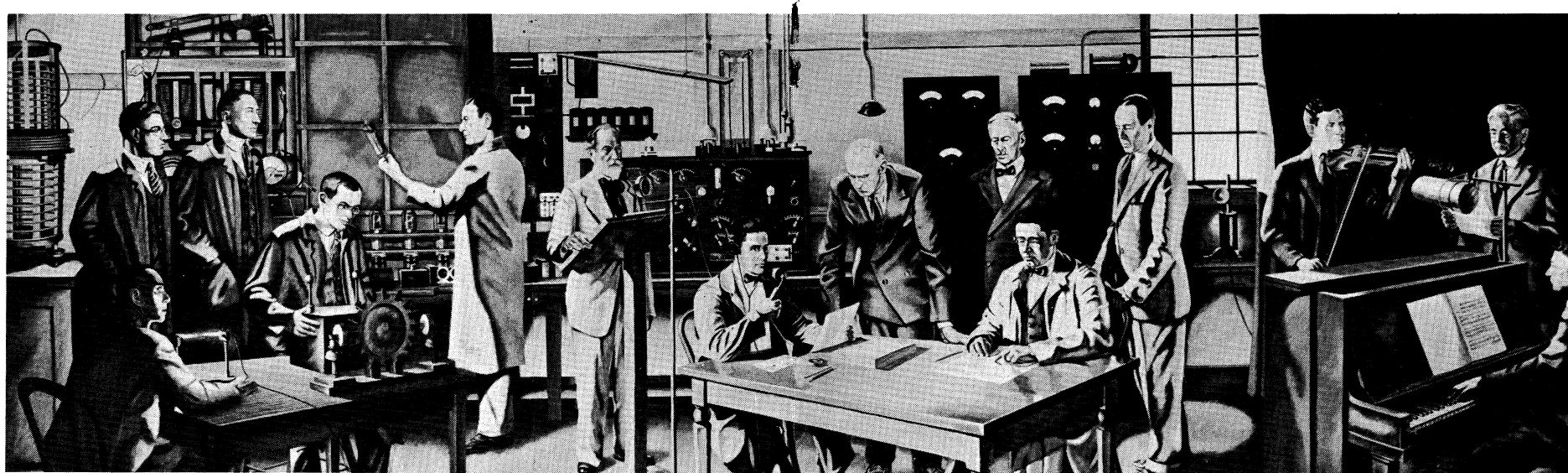
In the days before World War I wireless stations sent their messages by crackling dot-and-dash telegraphic signals. Only trained operators could read those code signals, so radio receivers were not very widely used. About that time, however, a new system of telephonic broadcasting was being talked about --a system which would send music and voice over the air. It used what was called a triode tube--somewhat similar to the tubes in our receivers today.

In a laboratory in Science Hall at the University of Wisconsin Professor Earle M. Terry and a group of his physics students had been running code station 9XM. They decided that they would build a telephonic broadcasting station, using the new vacuum tubes. In that way more people could understand what was being broadcast.

When these student experimenters began to look for equipment with which to build the station, they met with many disappointments. The tubes, which were the heart of the station, were not for sale. Nobody had yet developed a way of making them commercially. They were obliged to make their own.

Tube making was a challenging task. All of the materials which went into their tubes had to be tested. Some metals and

* - Mr. Engel has been with WHA continually since 1931 with the exception of 1942-46 service with the U.S. Army and a 1950 Fulbright Radio Research Scholarship in the Philippines. He is Professor in the U.W. Division of Radio-Television Education and Assistant Director of the Wisconsin State Broadcasting Service.



RADIO HALL MURAL ---

This mural, in the reception room of Radio Hall on the U.W. Campus, was painted by John Stella in 1941. It depicts real people and equipment associated with the early history of Station WHA.

Seated at the center table are Professor Earle M. Terry and student announcer-engineer Malcolm Hanson. In the group at the left are students and technicians who played a part in the change (1917-1918) from telegraphic to telephonic transmission. Standing behind the center table are faculty members

glass wouldn't stand the intense heat created by the electricity. It was necessary to try out each part step by step.

By 1917, after many months of hard work - marked by long nights in the laboratory - 9XM finally managed to get understandable broadcasts of talk and music into the air. Amateur listeners in Wisconsin were surprised when they heard voices in their earphones as they listened for code signals.

In 1918, because of the possible danger that wireless sending might be used to transmit information to our enemies, the government ordered all sending stations to tear down their equipment and stop operating. That was a dark day for the 9XM workers in Madison. They had been successfully exchanging messages with other experimenters throughout the country and with the U.S. Navy radio workers at various places on the Great Lakes. They, like the other laboratory stations which had been set up, wanted to continue their work.

who guided the infant WHA through the critical '30's and '40's. The group at the right symbolizes early programming over the station, using homemade microphones and equipment.

Left to Right: James B. Davis, glassblower; Roswell Herrick, Burton Miller, and C. M. Jansky, Jr., students; J. P. Foerst, mechanic; Professor Wm. H. Lighty; (seated) Malcolm P. Hanson, student, and Professor Earle M. Terry; (standing) Professors A. W. Hopkins, Edward Bennett, and H. L. Ewbank; Waldemar Gelch, Professor E. B. Gordon and Paul Sanders.

Then came good news. Before there was time to take down their 9XM equipment the Navy ordered the University to continue its work. The experimenters were asked to work more closely with the Great Lakes Naval Training Station north of Chicago and with naval vessels on the Great Lakes.

Among Professor Terry's student workers was Malcolm Hanson. In his enthusiasm for radio he joined the Navy and was assigned to duty on the Great Lakes. He was a leader in the experimental transmissions and from various places on the Lakes kept in radio contact with 9XM. This same Malcolm Hanson was later to become famous as Admiral Byrd's chief radio operator on the first flight to the South Pole. He was also to die a hero's death in an important naval mission in the Aleutians in World War II.

By war's end in 1918, station 9XM had developed its equipment and was being widely heard throughout the country. The first signals had been weak and uncertain, but they grew in strength. The science of broadcasting had been mastered.

Professor Terry was a man of vision and imagination - as well as a scientist. He saw in the wireless telephone a means whereby all people, wherever they might live, could have instant access to news, weather information, market reports, music and entertainment. His enthusiasm was shared by agricultural and extension workers at the University and by 1919 station 9XM was maintaining a regular schedule of broadcasting.

On January 13, 1922, the experimental 9XM (the 9 indicated the section of the U.S., the X stood for experimental, and the M for Madison) received a new government license and was assigned the new call letters WHA. The letters W-H-A were arbitrarily assigned and have no particular meaning.

WHA is now "the oldest station in the nation" in terms of continuous operation. The University has maintained the station since 1917 to the present time. In the days when the station began as 9XM there were other experimental stations in operation; some of them may even have begun earlier than 9XM. All of them, however, disappeared for one reason or another and left WHA as the oldest in the field. Among the other radio stations in the country claiming "pioneer" status, the oldest are WWJ, Detroit, which dates its beginning to August, 1920, and KDKA, Pittsburg, which got on the air just in time to report the election results on November 2, 1920.

Through the years educational broadcasting in Wisconsin has grown from the once faint signals of 9XM to a state-wide service over ten stations. In addition to WHA this includes WLBL, Auburndale and the 8-station State Radio Council FM network consisting of WHA-FM, Madison; WHAD, Delafield; WHKW, Chilton; WHRM, Rib Mountain; WHWC, Colfax, WHSA, Brule; WHLA, West Salem; and WHHI, Highland.

Wisconsin is proud of its contributions to radio history. In the early days it pioneered in the technical growth of radio. Today it is still pioneering - but now in the public service uses of the medium. WHA programs have gained national recognition in the field of educational broadcasting.

The advent of television presents another challenge to education which the University of Wisconsin has accepted. It is carrying on program research studies in its television laboratory, and is cooperating in the programming of the State Radio Council's television station WHA-TV. This low-power station operates on a limited schedule on an experimental basis. From it are expected to come significant results.

Communication is a vital factor in education. Without it there is no learning. It is inconceivable that Wisconsin, or any state, can fully meet its educational responsibilities without using the modern tools of education.

Effective, economical, far reaching - these new electronic aids to education are at our command if we will but use them.

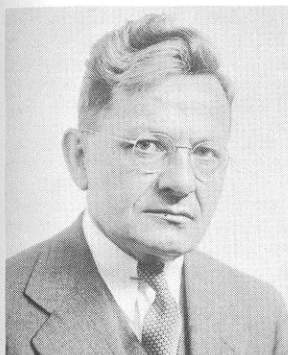
The opportunity is ours. What will we make of it?

###

In Memoriam

John E. Potzger

1886-1955



JOHN E. POTZGER was born in Presque Isle county, Michigan, in 1886. Up to about the age of 40 he taught in a Lutheran day school and conducted a private piano studio in Indianapolis, Indiana. He then embarked upon a long scientific career at Butler University, Indianapolis, where he remained until his death in September 1955, with a brief interlude at Indiana University to obtain a Ph.D. degree. In spite of the late date at which his scientific work began, Professor Potzger's list of publications includes 94 articles in local, national, and international scientific journals. The subjects range from grass taxonomy, science education, forest ecology and sociology, to his most important scientific contributions in the field of pollen analysis as applied to an interpretation of post-glacial climatic and vegetational changes. Seven papers dealt with Wisconsin flora with special attention given to pollen analysis and ecological succession. Most of this work was in the Price, Sawyer and Vilas county areas and several papers were published in the TRANSACTIONS of the Wisconsin Academy. One of these was a more popular study of the flowering plants and ferns of Vilas county. Professor Potzger also held important offices in scientific societies, among which were the Presidency of the Central Association of Science and Mathematics Teachers, and also that of the Ecological Society of America (in 1953). He became a member of the Wisconsin Academy of Sciences, Arts and Letters in 1941.

In Memoriam

Lowell S. Miller

1919-1955



LOWELL S. MILLER died in November 1955 at Rochester, Minn. He was born March 9, 1919 in Lehi, Utah, and lived at Provo where his father, Elmer Miller, is head of the Dept. of Economics at Brigham Young University. After receiving his M.A. from that school, he did graduate work at Stanford University and at the Universities of Illinois and Iowa. He was assistant professor in zoology

both at Parsons College, Fairfield, Iowa and at the Univ. of Illinois. In 1951 he became Director of the Davenport Public Museum, from where he came to Wausau, as first director of the Marathon County Historical Society in 1955. He was very active in community affairs and a member of several professional organizations, among which were the Iowa, Illinois and Wisconsin Academies of Science, and several zoological and museum associations.

JOHN JEFFERSON DAVIS

By S. C. Wadmond*
Minneapolis, Minnesota

The city of Racine in extreme southeastern Wisconsin has given two Presidents to the Wisconsin Academy of Sciences, Arts and Letters, both of them at the time of their election engaged in active practice as physicians, and able to give to science only the free hours of lives whose principal duties lay in other directions. One of them was Dr. Philo Romaine Hoy, a charter member of the Academy and its second President; the other was its twelfth President and the subject of this sketch.

The forebears of Dr. Davis afford some clue to his unusual and highly individual personality. His grandfather, Horatio Gates Davis, was one of the earliest settlers in Stephenson county, Illinois, coming there in 1838 from Meadville, Pa. He purchased



John Jefferson Davis, 1852-1937

the Rock Run sawmill which had been put up the year previously by others. Here the first post office located in the township was soon established with H. G. Davis as postmaster. Dr. Davis' father was Col. John A. Davis. He came with his father to Rock Run at the age of 14. All the school education that John ever received was prior to his coming to Illinois, and yet, when he died, few men of his age were so well versed in the history of this country, so deeply read in political science, so intimate with all branches of science, as he.

He was in every sense of the word a self-made man. In 1849 he was married to Amy Springer of Rock Run, formerly of Franklin county, New York. Col. Davis was a farmer and one of that type of men who raise themselves to positions of honor by their own efforts. Well read, industrious, active and energetic, he was the

chosen leader of his party in his district and often held positions of honor and trust. He represented Stephenson county in the Illinois House of the 20th and 21st General Assemblies, covering the period from 1856 to 1860. At the outbreak of the Rebellion he volunteered his services and helped organize the 46th Regiment Illinois Volunteer Infantry, of which he was chosen Colonel. Severely wounded at the battle of Shiloh, he returned to his home with his

* - Samuel C. Wadmond has been a member of the Wisconsin Academy since 1903 and is presently a Life member residing in Minneapolis. Since the days when he was an executive of a Delavan (Wisconsin) Knitting Company, he has intensively pursued his hobby of botany. His articles on Wisconsin flora appeared both in the Academy's TRANSACTIONS and in RHODORA. After he moved to Minneapolis, he donated his herbarium and library to the University of Minnesota.

right arm useless and his whole constitution shattered and weakened. A grateful people offered him their support for a seat in Congress, which he refused. In spite of all remonstrances, he returned to his regiment. Shortly afterwards, in October of 1862 while gallantly leading his regiment in a charge at the battle of Hatchie, Tenn., he was mortally wounded. A grateful constituency renamed the postoffice Davis, and his grave has been given perpetual care in the village still bearing his name, about 15 miles northeast of Freeport, Illinois.

In 1909, at the tender age of 78, Dr. Davis' mother, Mrs. Amy D. Winship (for she had married a second time) decided to take special courses in American universities in order to keep abreast of current knowledge, and for ten years was a co-ed, the nation's oldest - at the Universities of Ohio, Wisconsin, California, Kansas, Texas, and Florida. It is said she never had to take notes on lectures, so retentive was her memory. With such a parental background, you will not wonder that the son reached high achievement.

Dr. Davis was born at Davis, Illinois November 2, 1852. Although bereft of a father before he was ten years old, nothing could deter him from obtaining an education. It was not for nothing that he was the son of two such doughty souls as Col. John Davis and Amy Springer. In 1868 he entered the University of Illinois to become the youngest member of its first graduating class - the class of 1872. It is a far cry from the University of Illinois of today to the infant agricultural school of 1868, made possible under the Merrill Land Grant Act which gave thirty thousand acres of land for each Senator and Representative in Congress for the purpose of endowing "at least one college where the leading object shall be to teach such branches of learning as are related to agriculture and the mechanic arts."

Nearly sixty years ago, this chronicler made his first botanical trip into the North Woods by invitation of Dr. Davis. Another member of the party was a Fred Hatch, then a regent of the University of Illinois, and a classmate and intimate friend in college days of Dr. Davis. Had I ever dreamed that it would some day fall to my lot to write this record, I would certainly have taken copious notes of what Mr. Hatch told me on that trip concerning the four years spent at the University of Illinois. They were roommates, I believe. I can only recall his telling me of Dr. Davis working his way through school, and of how he was picked by his classmates as the most likely of all of them to make his mark in the world. He did.

From Illinois, Dr. Davis went to Hahnemann Medical College where he received his M.D. degree in 1875. He first went to Vinton, Iowa, where he apparently remained only a very short time. I have a herbarium specimen from there collected by him in 1876. His mother had re-married and moved to Racine, Wisconsin in 1870. After a short residence in Vinton, he followed his mother to Racine and began the practice of medicine in that city which he was to follow with signal success for over thirty years.

Patients did not flock to this young medic in such vast numbers as to seriously interfere with his leisure, and there was abundance of time in those beginning days for the study of the plant life of the new area, which he immediately attacked with his customary enthusiasm and thoroughness. I have collections which he shared with me made at Racine as early as 1879.

In June, 1955 the UW regents accepted the bequest of JOHN JEFFERSON DAVIS, provided at the time of his death in 1937. He had left his estate in trust, the income to go to his son and daughter, both of Racine. Eventually, it was to be given to the University for research in botany and biology. John A. Davis, the son, died last May, and the income from half of the estate is now available for botanical research. It is estimated that the income will amount to \$2,500 annually.

Not only did Dr. Davis find the flora of his new home intensely interesting and varied, embracing as it did woodland, prairie and littoral species, but he found a congenial soul in his fellow physician, Dr. Philo Romaine Hoy, who had come to Racine in 1846. A busy country doctor, he had found time nevertheless to interest himself in every side of natural history but gave most attention to animal life. He had already become a veteran student of birds, insects and fishes, and was also an enthusiastic collector of plants and of fossils from the ancient crinoid fields of Racine. I have an idea, however, that Dr. Davis needed no urge from the good old Dr. Hoy or anyone else; somewhere along the line there had been lighted the Olympic torch and for him only death could extinguish it.

Dr. Davis was diligent and skillful in the practice of medicine and gradually built up a large clientele. He was at one time President of the Racine Physicians' and Business Men's Association and in 1894 was chosen President of the Wisconsin Medical Society. He was our family physician when I was a small boy, and when I began a home of my own, it was only natural that he should be our medical adviser. My wife has always believed that our first-born --our only son--would not be alive today had it not been for the skill and wisdom of this man; that no one but he could have ever have pulled him through, so mortally sick was the little fellow.

Late in the '90's when Dr. Davis and I began to vacation together in various northern counties of the state, it was a 50/50 affair, 50% piscatorial and 50% botanical. This division worked out very satisfactorily; we fished in the cool early morning hours, and when it became uncomfortably warm on the lakes, we would pull up the boat and spend the warmer hours of the day on the wooded shores which in those days were well-nigh virgin so far as forest growth was concerned. Then along towards evening, out on the water again until dusk, and then back to camp with our vasculum and creel. The Doctor was a good fisherman as he was good in anything he undertook. As the years moved along I noticed that less time was spent fishing and more devoted to botanizing, until finally the fishing paraphernalia was left at home entirely.

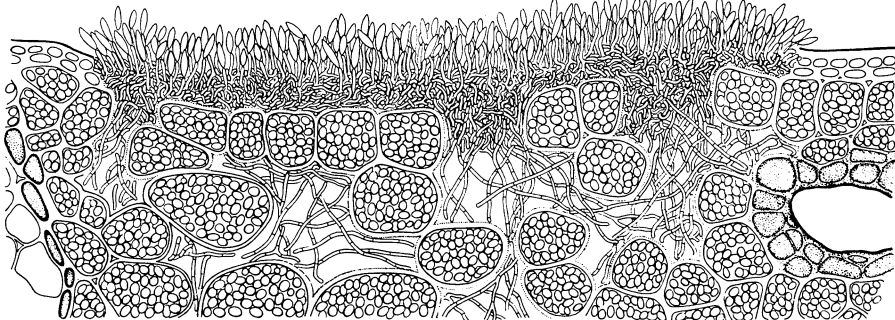
Dr. Davis was elected to active membership in the Academy on December 30, 1892. His first paper, "A supplementary list of Parasitic Fungi of Wisconsin," was published in the TRANSACTIONS of 1893. You see he lost no time in becoming a contributing member and he kept up this role unremittingly for over 44 years. Dr. Trelease in Vol. VI of the TRANSACTIONS had published "A Preliminary List of the Parasitic Fungi of Wisconsin." In his first paper Dr. Davis modestly writes: "Dr. Trelease's paper was presented to the Academy in December, 1882. Since that time considerable additional material has been collected which, it would seem, ought to be used for the extension of the list." How Dr. Davis

kept the torch alight is well known to mycologists over the world. He soon came to be recognized as one of the outstanding men in the councils of the Academy, and was elected to the Presidency for the term 1903-1905.

It was the Doctor's hope, as he expressed it many times, that when he passed the retirement age in the practice of medicine, he could find opportunity in some way to devote all, or the major portion of his time, to the study of his beloved fungi. The son of a mother who attended college when she was well past eighty, is speaking: (I am quoting from Dr. Davis' own address as Retiring President of the Academy, delivered February 8, 1906) "No well-informed and right-minded person considers his education completed while his powers remain. Well taught indeed is he who leaves the college knowing how to educate himself. Scientific observation and experiment have an educational value that should commend them to those who have learned that lesson and who can thus aid science while they improve their powers. The influence of the study of nature upon character I believe to be considerable. Contact with nature tends to preserve the primal qualities that characterize those of whom it was said 'of such are the kingdom of Heaven,' as well as to preserve something of the physical freshness and buoyancy of youth."

In 1911, Dr. Davis definitely gave up the practice of medicine and came to Madison to become Curator of the Herbarium, an ambition he had cherished for years. Most men at the age of 60, having provided a competence against old age, and feeling they had served their generation well would have been quite content to retire and watch the rest of the world go by. No so with Dr. Davis. One professional career had been ended. He immediately began upon a second, and in it achieved signal distinction. I refer to those studies on parasitic fungi which eventually established him as a world authority.

I have mentioned his first paper on the Parasitic Fungi of Wisconsin published in the TRANSACTIONS of 1893. Supplementary lists followed with persistent regularity. It seemed as though no yearly Academy program was quite complete unless it included some notes on his further explorations in his chosen field. How well he honored his second professional career, others can tell of far better than I. I feel I am not indulging in superlatives, however, when I venture the belief that in the field of rust fungi his high rank will always be secure and unchallenged. Dr. Davis' notebooks



Gloeosporium balsameae (Found on Abies balsamea, Clark lake, Door county, July 22, 1918.) From "Notes on Parasitic Fungi in Wisconsin -- VII" in Vol. XX of TRANSACTIONS.

and original collections of the fungi and higher plants of Wisconsin are preserved in the Herbarium of the University of Wisconsin.

I well remember the last visit I had with my old friend and mentor. He told me he was finding he could not remember names as well as formerly, but, aside from that, he was faring excellently. In the course of our visit I told him of a rare native sunflower which in Gray is reported only from Columbus, Ohio, and which I had grown successfully in my garden from roots sent me from Ohio State University. It transpired that he knew a lot more about that particular species of sunflower than I did, and proceeded to tell me of its having recently been found near Madison in company with two other native sunflowers, one a far western species and the other a middle westerner, the conditions indicating that the Columbus sunflower was apparently a hybrid of these two--he named the two parents as glibly as could be in spite of that inability to remember names, which he regretted. At lunch and in his room following, and later back at his office we discussed many things and many plants we had met in our Wisconsin wanderings. If his memory was in the slightest impaired, I should like to be afflicted with a similar impairment.

A few months later, on Sunday afternoon, February 28, 1937, a group of those who loved and honored him met at the University Club at Madison, Wisconsin, in a memorial service for our late friend. At that service Dr. Birge well said: "He represented the spirit of the founders of the University. His career was made possible by those founders who wished to make possible the pursuit of knowledge without thought to monetary value of the goal. The modern attitude would not have made it possible for a man to round out his life in unselfish scientific pursuits as did Dr. Davis."

It is not given to many men to have their lives ordered so exactly in accord with their hope and ambition as was that of Dr. Davis. And the end came just as he had always wished it might: at the close of a work day - at his desk writing - "with his boots on" as it were; no gradual decline into senility, no painful or long-drawn-out illness, but on the full current of life and activity sweeping out into the unknown!

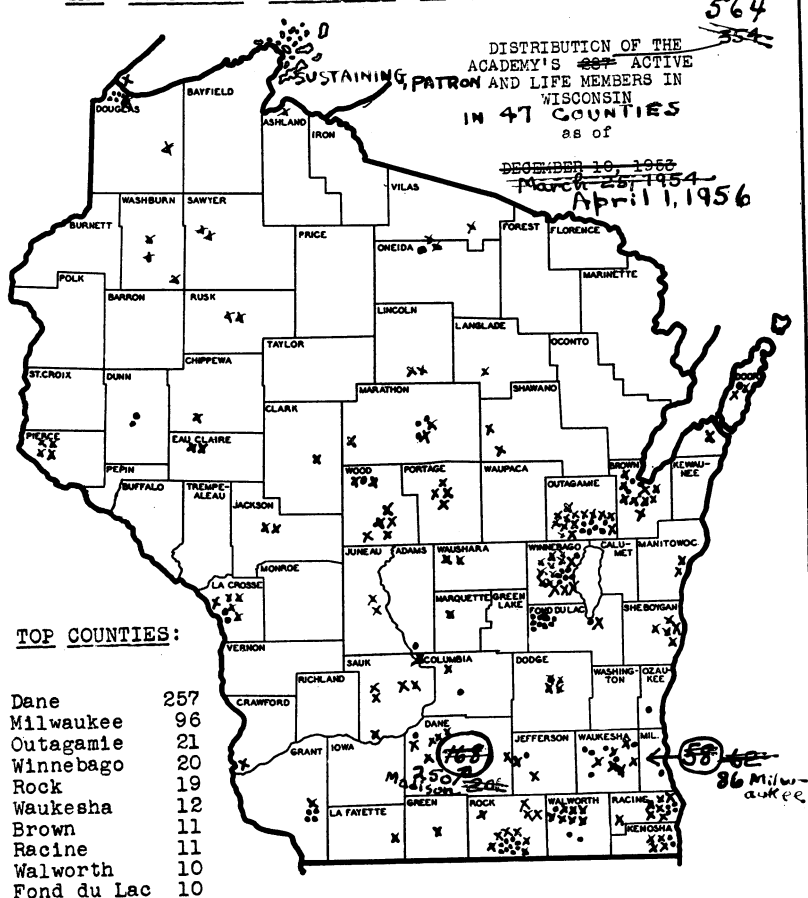
#

REPORT ON WATER POLLUTION CONTROL --

The Wisconsin Committee on Water Pollution is now proceeding with a "vigorous follow-up campaign to speed up compliance with orders" for the construction of sewage and industrial waste treatment plants, according to a report by T. F. WISNIEWSKI, director of the committee, in addressing an Industrial Waste Institute conducted by the UW Extension Division's Department of Engineering. He said that revision of the water pollution law in 1949 led to stronger measures to control stream pollution by sewage and waste. At that time, Wisconsin had 62 communities discharging untreated sewage into streams. Through direct contacts with municipal officials, the Committee's activities have now reduced that number by more than 50 per cent.

Wisniewski listed five steps which must be taken to improve Wisconsin streams: Construct adequate municipal and industrial waste treatment facilities; operate existing and new plants at maximum efficiency and continuously; conduct employee training programs to emphasize need for clean waters and for waste prevention and treatment; research to develop practical and effective methods of waste control and treatment; detailed stream studies to measure the degree of improvement attained and indicate present and future treatment needs.

THE ACADEMY'S MEMBERSHIP IS GROWING!



U. S. CIVIL SERVICE COMMISSION ANNOUNCEMENT --

There is an urgent need for Chemists, Mathematicians, Metallurgists, Physicists, and Electronic Scientists in the Washington, D. C. area. Vacancies are in various Federal agencies and pay salaries ranging from \$4,345 to \$11,610 a year. To qualify for positions paying \$4,345 a year, applicants must have had appropriate education or a combination of education and experience. For the position of Electronic Scientists, appropriate technical or scientific experience alone may be qualifying. For higher-grade positions, professional experience is also required. Graduate study may be substituted for all or part of this experience, depending on the grade of position. No written test is required.

Application forms may be obtained at many postoffices throughout the country, or by writing to the U. S. Civil Service Commission, Washington 25, D.C. Applicants should ask for Announcement No. 46(B). Applications will be accepted until further notice.

JUNIOR ACADEMY NEWS

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

This year the West High School Science Club, Madison, is acting as host to the Junior High Statewide Meeting. The date is set for May 19, at West High School, 30 Ash street, Madison. President of the Club is TED ODELL, and the sponsor is RICHARD BUTLER. Members of the committee for the meeting are MARSHALL MILLER, Chairman, REG WILLIAMS, DICK QUINTANA, and MIKE BIGNELL.

Chairmen of the several District Committees for 1956 meetings of the Junior Academy are: Stevens Point Area - ROLAND TRYTTEN, Wisconsin State College, Stevens Point; Appleton Area - L.A. KRAUSE, Neenah High School, Neenah; Milwaukee Area - RAPHAEL HAWLEY, Wauwatosa High School, Wauwatosa; La Crosse Area: Rev. JOHN M. SCOTT, Campion High School, Prairie du Chien. The Wisconsin Science Talent Search Committee is led by ROY J. CHRISTOPH, Biology Dept., Carroll College, Waukesha.

Among the 40 top winners of the National Science Talent Search conducted by Science Clubs of America are two Junior Academy members. CAROL ANN JOYCE, Co-president from Appleton Senior High School, and IDA LOUISE RIENDL from Columbus High School, Marshfield have been named winners of the trip to Washington and the opportunity of competing for the grand prize scholarship. Last year's recipient of one of the top prizes, KATHLEEN HABLE, is currently attending Marquette University.

A number of the eight Wisconsin boys and girls who have earned honorable mention in the Science Talent Search have already received recognition on programs of our Junior Academy. Congratulations for their fine work are to be given to SANDRA TREICHEL, Wisconsin High, Madison, THOMAS EBERT, Merrill Senior High, MARJORIE LUTZBE, Merrill Senior High, NEIL KESTNER, Boys' Technical High, Milwaukee, DONALD KNUTH, Milwaukee Lutheran High, SIDNEY RAUTBORT, Washington High, Milwaukee, and WINNIFRED BATTIG and EUGENE DE SOMBRE of North High, Sheboygan.

- - -

A CLOUD CHAMBER

By Charles Hutchins
Neenah High School

Since the subject of Nuclear Physics has always intrigued me, I thought I would like to try something constructive along that line. Because the cloud chamber is about the closest thing to seeing radio-activity there is, I decided to build one.

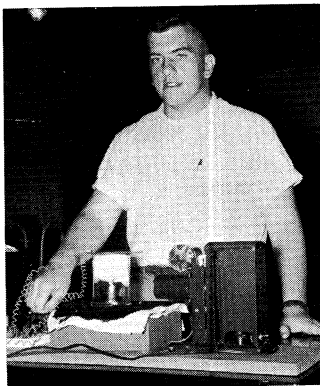
I found that the Wilson Cloud Chamber, with its elaborate piston arrangement for obtaining supersaturation by compression and decompression was not the best way for me to do it, because it is not a continuous process. I decided on another way of supersaturating the air.

By applying a potential across the chamber, which was a small flask, I could de-ionize the air, since unlike charges attract. I had some difficulty here as I didn't know how much voltage it needed nor how steady it need be. I finally succeeded by building a

300 volt D.C. power supply with moderate purification.

The solvent I used was ethyl alcohol held by cotton in the top of the flask. At this point I had a saturated chamber which was de-ionized. To get it supersaturated, I cooled it by means of dry ice, thus cutting down the air's ability to hold moisture. Since there were no ions in it for the ethyl alcohol to condense on, it was in a supersaturated state, holding more moisture than it normally could.

I obtained a radioactive source by inquiring of the Atomic Energy Commission, who in turn referred me to the United States Radium Corporation, from whom I received a quarter inch square piece of polonium, emitting one hundred alpha particles per second.



With the polonium inside the chamber it was set to work. An alpha particle, which is nothing more than the positively charged nucleus of a Helium atom, containing two positively charged protons and two neutral neutrons, comes off the source at one-fifth the speed of light. At this speed of better than thirty-seven thousand miles per second, it inevitably collides with an electron of one of the oxygen, nitrogen or other atoms in the air. It collides with such force at this great speed that it knocks the electron out of its orbit. Since the loss of a negatively charged electron leaves the atom with a positive charge, it is a positive ion. The ethyl alcohol, negative in respect to the positive ion, is attracted to and condenses around the ion. This produces a series of "vapor trail" like streaks along the path of the alpha particle, which will continue indefinitely if the current direction is occasionally reversed to keep the chamber deionized.

This experiment has done one thing more than anything else for me. It has acquainted me with the feeling of trying over and over something which fails every time. I know how Edison must have felt when his electric light failed time after time, and how elated he must have been when he finally succeeded and saw it work for the first time.

- - -

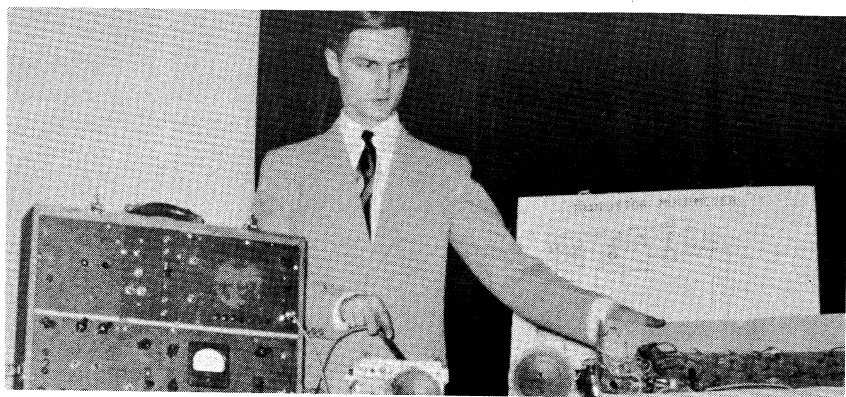
CONSTRUCTION AND DESIGN OF TRANSISTOR CIRCUITS

By Gene Uehling

Aquinas High School, La Crosse

The purpose of my science project was to construct and design transistor circuits. The project consisted of the following pieces of equipment: a signal generator, a signal tracer, a transistor multi-meter, an intermittent recorder, and a transistor stethoscope.

The signal generator uses one transistor which generates the necessary frequencies that are used in radio servicing. The radio frequencies generated may be either modulated or unmodulated. The signal tracer uses four transistors and has a very good frequency response. The frequency response is accomplished by using large



coupling condensers and diodes. It is used four ways: as a speaker, as a RF probe, as a low gain circuit, and as a high gain circuit.

The transistor multi-meter is different insofar as it overcomes some of the previous difficulties in transistor circuits. A control in the collector circuit is used to control the upper part of the meter reading. A control from the base to the emitter controls the transistor gain, and a control from the base to the collector is used to stabilize the circuit. To return the meter to zero a control is placed in series with a battery in opposite polarity to the meter. The ranges are 0 to .1, 1, 10, 100, 500, 1000, volts A C or D C. In resistance 0-100, 1000, 10,000, 1 me, 10 meg ohms. For current 0-.001, .01, 10, 1, 10 amps. The intermittent recorder is used to detect the failure of a circuit. It uses three transistors and may be used with the multi-meter or separately. It operates by registering the change of voltage in the circuits. The current and voltage is amplified so as to operate the relays at less than 10 micro-amp.

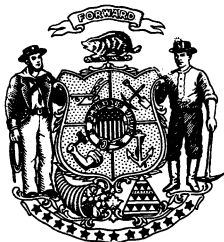
The equipment is portable and is more accurate than some of the vacuum tube models in use.

The transistor stethoscope is used to amplify heart sounds. It uses three transistors. Various frequencies may be cut off by placing condensers across the primary of the transformers. The frequencies that are cut off by the condensers are 100 cycles and 200 cycles. The amplifier is coupled by transformers. To obtain such low frequency response, large condensers were used. A special microphone was obtained to register heart sounds.

Some of the troubles I encountered were due to light sensitivity of the transistors, temperature changes, and their natural instability. I found circuits that corrected the last two troubles.

I have spent 1000 hours working on this project but feel I have found an adequate application for transistors in the circuits that I used for this equipment. I feel that this was also very educational and will help me in years to come.

#



State and Academy News

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

Marquette University will sponsor a five day summer institute for science teachers with Professors LAWRENCE W. FRIEDRICH, S.J. and JOHN G. SURAK as directors of the project. Tentative plans have also been announced for offering a new Master's degree for science teachers. ... Father FRIEDRICH was also chairman of the Executive Committee of the Southeastern Wisconsin Fair which was held April 12-15 in Brooks Memorial Union. ... Professor ELLA C. CLARK recently reported that the average Milwaukee child spent 24 hours watching television last year, according to a survey. She is a member of the Milwaukee Radio and Television Council. ... GEORGE A. PARKINSON, commanding officer of Marquette's Naval Reserve Officers School, was recently named "Engineer of the Year" by the directors of the Engineers' Society of Milwaukee. ... Professor FRANK L. KLEMENT's address, "Lincoln's Critics in Wisconsin," has recently been published by the Lincoln Fellowship of Wisconsin. ... A recent publication from the Department of Chemistry appeared in the December 5, 1955 issue of the Jour. of the Amer. Chemical Society: "On the Rate of the *cis-trans* Interconversion of Dichlorobis-(ethylenediamine)-cobalt (III) Chloride" by DANIEL T. HAWORTH, EDWARD F. NEUZIL and SCOTT L. KITTSELEY.

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

Professor FRED TIETZE (English) has been awarded a research grant for the coming summer by the University Research Committee to devote full time to the study of "Tennyson, Science, and the Poetic Sensibility." He will do his research at the Universities of Wisconsin, Chicago, and Illinois. ... Professor JOHN VOZZA (Chemistry) participated in the judging of science exhibits presented at the Science Fair of the Lutheran High School of Racine.

NEWS NOTES FROM THE U.W. PHYSICS DEPARTMENT

From October 1954 through January 1956 members of the U.W. Physics Department at Madison published 91 papers, abstracts and notes in scientific journals. Senior authors of these included Professors W. W. BEEMAN, H. H. BARSCHALL, R. N. DEXTER, J. R. DILLINGER, W. F. FRY, R. G. HERB, L. R. INGERSOLL, D. A. LIND, W. M. MACDONALD, J. E. MACK, E. E. MILLER, H. T. RICHARDS, J. R. ROEBUCK, R. G. SACHS, K. R. SYMON, W. D. WALKER, K. M. WATSON and J. G. WINANS.

Papers or articles prepared all or in part by Academy member J. G. Winans were as follows: (1) Motion and Spectrum of Arc Cathode Spot in a Magnetic Field, Phys. Rev. 1955; (2) Temperature Measurements from Iodine Absorption Spectra, Fifth Symposium on Combustion, 1955; (3) General Statement of Newton's Laws, Am. Jour. Phys. 1955; (4) Motion of Arc Cathode Spot in a Magnetic Field, Phys. Rev., 1954; (5) Energies of Dissociation of Heavy Diatomic Molecules, U. of Chicago Seminar Rep. Spectroscopic Molecular 4, 1955; (6) Volume Exclusion Principle, Am. Jour. Phys. 1954;

(7) Retrograde Motion of Cathode Spot, Phys. Rev. 1954; and (8) Motion and Spectrum of Arc Cathode Spots, Gaseous Electronics Conf. Report, Phys. Rev. 1955.

HONORS AND AWARDS

Members of the Wisconsin Academy who have recently received honors or awards are noted as follows: R. W. POULTER, honorable mention and one other award in the 11th Chicago International Exhibition of Nature Photography; TAKERU HIGUCHI, UW Professor of Pharmacy, the fourth Sturmer Memorial Award of the Philadelphia College of Pharmacy and Science for outstanding contributions in the public health fields; ALICE E. SMITH, State Historical Society research director, an award from the American Association for State and Local History for her biography of James Duane Doty; MERRITT Y. HUGHES, UW Professor of English, has been named "the outstanding Milton scholar of the year" by the Milton Society of Chicago; and GILBERT H. DOANE, Academy and UW Librarian, was ordained an Episcopal priest and will participate in that office in addition to his University duties.

ORGANIZATIONAL POSITIONS

Wisconsin Academy members who were recently elected or appointed to new positions in professional or official organizations include: ROBERT S. ELLARSON of the Dept. of Forestry and Wildlife Management has begun a new series of Wisconsin School of the Air broadcasts on nature and conservation entitled, "What's New Outdoors?" This will be part of his assignment as extension specialist for the College of Agriculture in this field. ... E. L. CHAMBERS was elected treasurer of the Wisconsin State Horticultural Society; LINDLEY J. STILES, Dean of the U.S. School of Education, has been elected Vice-President of the National Society of College Teachers of Education; ALBERT M. FULLER, Curator of Botany at the Milwaukee Public Museum, was re-elected Chairman of the State Board for the Preservation of Scientific Areas; and WILLIAM J. BROWN of the Kimberly-Clark Corporation at Neenah is a member of the National Advisory Committee of the American Forest Products Industries, Inc.

MISCELLANEOUS NEWS NOTES

The Wisconsin Fellowship of Poets plans a "Poet's Retreat" at The Clearing at Ellison Bay, Door county, the week of May 6-12. Further information can be secured from Mrs. Margaret Buxton, 617 East st., Baraboo. ... The University of Wisconsin ranked tenth in a survey of all the nation's universities in the fall of 1955 with an enrolment of 20,119. The total enrolment of all colleges and universities in Wisconsin was 56,027 - an increase of more than 11% over the previous year. ... According to the Jan.-Feb. issue of "Tree Tins" (pub. by Trees for Tomorrow, Merrill), a new forest genetics research center will be established at Rhineland by the Lake States Forest Experiment Station (USFS, St. Paul). ... The Wisconsin Alumni Assn. is collecting books published by U.W. alumni for a library of books (preferably autographed) for the projected Alumni House. The library is presently housed in their offices at the Memorial Union in Madison. ... Professor ARTHUR D. HASLER, of the U.W. Zoology Department, reported on his recent experiments at the Zoologisches Institute in Munich before a symposium on Marine Biology at the Scripps Institute of Oceanography. His evidence supported the theory that fish use the sun as a navigational aid.

#

MEMBERSHIP LIST
WISCONSIN ACADEMY OF SCIENCES, ARTS AND LETTERS

K e y

<u>Type of Membership</u>		<u>Date</u> - Year of first
A - Active	L - Life	affiliation
C - Corresponding	LB - Library	<u>Form</u> - Alphabetical and
H - Honorary	P - Patron	geographical
S - Sustaining		

W I S C O N S I N

ANTIGO

Schmiege, D. C. (A 55)

APPLETON

Berry, A. C. (A 54)

Brauns, Fritz E. (A 43)

Brown, Relis B. (A 54)

Cunningham, M. P. (A 54)

Darling, S. F. (A 53)

Dimick, Robert (A 54)

Furminger, Miss A. L. (A 55)

Gilbert, W. Paul (A 45)

Harriman, John (A 54)

Institute of Paper Chemistry (LB 54)

Isenberg, I. H. (A 54)

Knight, Douglas M. (A 54)

Lewis, Paul (A 53)

Locksmith, Lila (A 55)

Mackesy, Mrs. Lillian (A 55)

Schlafke, Don (A 41)

Sealts, M. M., Jr. (A 54)

Wiley, A. J. (A 54)

Wiley, Mrs. M. W. (A 54)

Wise, Louis E. (A 42)

ASHLAND

Dexter, N. B. (A 54)

BABCOCK

Grange, Wallace B. (A 54)

BARABOO

Walker, D. W. (A 54)

Walker, J. T. (A 54)

BELOIT

Aronson, C. D. (A 54)

Boutwell, P. W. (A 21)

Brown, Robert M. (A 49)

Curtis, C. G. (A 55)

Finch, J. V. (A 54)

Fuller, Edw. C. (A 53)

Godfrey, William S. (A 54)

Huffer, Ralph C. (A 49)

Irrmann, Robert H. (A 49)

Liebherr, H. G. (A 55)

Liebherr, Mrs. H. G. (A 55)

McGranahan, Mrs. Floyd (A 49)

Porter, L. C. (A 54)

Upton, R. Miller (A 54)

Welty, Carl (A 35)

BIRNAMWOOD

Lonsdorf, John A. (A 54)

BLACK RIVER FALLS

Conservation Dept. (Fisheries) (LB 54)

Roberts, H. D. (A 54)

BURLINGTON

Lipton, S. H. (A 55)

BUTLER

Domagalla, B. P. (A 24)

CAMBRIDGE

Dahlen, J. H. (A 54)

Sivesind, Raymond S. (A 54)

CEDARBURG

Stephenson, R. G. (A 46)

CHIPEWA FALLS

Kemper, C. A. (A 55)

DELAFIELD

Nelson, A. P. (A 55)

DELAVAN

Davies, Ithel B. (A 37)

EAGLE RIVER

Goldsworthy, V. (A 54)

EAU CLAIRE

Fay, Mark J. (A 56)

Gerberich, John B. (A 56)

ELAND

Peterson, Miss M. A. (A 46)

ELM GROVE

Henderson, Dion (A 51)

EPHRAIM

Holand, H. R. (A 54)

Wilson, Harold C. (A 54)

EVANSVILLE

Smith, Mrs. Helen C. (A 55)

FISH CREEK

Stock, Kurt (A 22)

FOND DU LAC

Keller, Sister M. Anthony (A 39)

Reed, Charles L. (S 55)

FORT ATKINSON

Montie, Earl J. (A 54)

GENESEE DEPOT

Greene, Howard T. (A 44)

GREEN BAY

DeCleene, Rev. L. A. V. (A 29)

Guilford, Harry G. (A 54)

Kellogg Public Library (LB 54)

Kingston, L. H. (A 55)

Mann, H. L. (A 55)

Seto, Frank (A 53)

Stewart, W. F. (A 55)

Waters, Maurice (A 55)

GREEN BAY (Continued)

Westenberger, Rev. E. J. (A 33)
 Zarling, Lillian (A 55)
 Zywicki, Donna (A 55)

GREENVILLE

Schulze, R. G. (A 55)

HARTLAND

Friend, Mrs. Neita O. (A 55)

HAYWARD

Kahmann, Karl (A 54)
 Zirrer, Francis (A 42)

HORICON

Hunt, Richard (A 55)
 Jahn, L. R. (A 55)
 Poulter, R. W. (A 54)
 Schneider, A. A. (S 55)

KENOSHA

Cyzak, Charlotte M. (A 56)
 Doherty, Mary A. (A 46)
 Greco, Jennie (A 45)
 Sander, Phil (A 55)
 Werner, Thomas (A 54)
 Whitney, Miss B. E. (A 55)

LA CROSSE

Comeau, Roger (A 54)
 Martindale, Katharine (A 55)
 Rovang, Theo (A 54)
 Uehling, Gene (A 53)
 Wis. State College (LB 55)

LADYSMITH

Bauer, W. B. (A 54)
 Olsen, Miss I. C. (A 54)

LAKE NEBAGAMON

Gilbert, E. M. (A 07, L 49)

LOGANVILLE

Kruse, Mrs. Carla (A 54)
 Kruse, Harold (A 54)

LOYAL

Thomas, J. R. (A 54)

MADISON

Aberg, Wm. J. P. (A 45)
 Allen, Chester (A 55)
 Allen, T. C. (A 46)
 Anderson, Don (L 42)
 Attoe, O. J. (A 56)
 Backus, M. P. (A 56)
 Baerreis, D. A. (A 53)
 Baldwin, Ira L. (A 32)
 Baumann, Carl (A 44)
 Beale, J. A. (A 54)
 Bean, E. F. (A 26)
 Beck, Stanley D. (A 54)
 Becker, Robert M. (A 53)
 Benjamin, D. M. (A 55)
 Bird, H. R. (A 54)
 Blackshear, Mrs. O. (A 54)
 Block, Haskell M. (A 56)
 Bohrod, Aaron (A 54)
 Brandenburg, F. S. (L 48)

MADISON (Continued)

Brettingen, David (A 53)
 Brink, R. A. (A 23)
 Browne, Frederick L. (A 21)
 Bryan, George S. (A 15)
 Bryson, R. A. (A 54)
 Busse, L. W. (A 46)
 Butler, Richard (A 54)
 Butts, Carol J. (A 56)

Cassidy, F. G. (A 54)
 Chambers, E. L. (A 55)
 Clark, Harry H. (A 30)
 Clark, Paul F. (A 21, C 53)
 Clarke, H. M. (A 48)
 Colbert, R. J. (A 55)
 Coleman, Thomas E. (A 42)
 Colmano, Germille (A 56)
 Cooper, D. C. (A 29)
 Cooper, Edwin L. (A 54)
 Corey, R. B. (A 55)
 Cottam, Grant (A 53)
 Conservation Dept.
 (Fisheries) (LB 54)
 Curti, Merle (A 54)
 Curtis, John T. (A 33)
 Daniels, Farrington (A 21)
 Deutsch, H. F. (A 42)
 Dicke, R. J. (A 47)
 Dicke, Mrs. Hermine (A 52)
 Doane, Gilbert H. (A 37)
 Drescher, Wm. J. (A 56)
 Duncan, C. G. (A 54)
 Duncan, R. E. (A 54)

Ebling, Walter H. (A 54)
 Elaine, Sister Mary (A 55)
 Ellarson, Robert S. (A 47)
 Elvehjem, C. A. (A 44)
 Emlen, J. T. (A 55)
 Enck, John J. (A 52)
 Engel, H. A. (A 56)
 Engel, Martha S. A. (A 48)
 Engelke, Mrs. M. W. (A 55)
 Engelke, W. W. (A 55)
 Evans, H. P. (A 54)
 Ferry, J. D. (A 54)
 Finch, Vernor C. (A 21)
 Fisher, E. H. (A 54)
 Fisk, Emma L. (A 21)
 Fluke, C. L. (A 19)
 Fluke, Mrs. S. M. (A 52)
 Ford, J. C. (A 43, L 44)
 Fowlkes, John Guy (A 44)
 Fox, Philip G. (A 42)
 Fraser, L. A. (A 51)
 Frautschi, W. (A 42, L 48)
 Frazier, Wm. C. (A 46)
 Fred, E. B. (A 22)
 Gerry, Eloise (A 19)
 Graber, L. F. (A 29)
 Grace, Harriett M. (A 44)
 Greene, H. C. (A 42)

MADISON (Continued)

Guyer, M. F. (A 12, L 51)
 Haag, M. R. (A 55)
 Haas, Glenn E. (A 56)
 Habeck, J. R. (S 55)
 Halbert, Charles A. (A 42)
 Hammer, P. C. (A 54)
 Hanley, W. M. (A 45)
 Hanson, George F. (A 53)
 Harper, Josephine L. (A 51)
 Hartley, C. F. (A 56)
 Hasler, A. D. (A 40)
 Hedges, W. L. (A 55)
 Heffner, R.M.S. (A 44)
 Hembre, I. O. (A 54)
 Herriott, J. H. (A 54)
 Hesseltine, W. B. (A 54)
 Hickey, J. J. (A 48)
 Higuchi, Takeru (A 49)
 Hole, Francis D. (A 52)
 Hougen, O. A. (A 45)
 Hrubesky, C. E. (A 43)
 Huffer, C. M. (A 54)
 Hughes, Merritt Y. (A 40)
 Ihde, A. J. (A 45)
 Ihde, Mrs. Olive (A 53)
 Ingraham, M. H. (A 29)
 Iltis, Hugh H. (A 55)
 Jackson, A. S. (A 55)
 Jackson, M. L. (A 47)
 Jacobson, J. R. (A 46)
 Jenkins, John W. (A 54)
 Jones, Mrs. Edith (A 53)
 Jones, F. R. (A 19)
 Kant, Fritz (A 44)
 Kaplan, Louis (A 56)
 Keitt, G. W. (A 17)
 Kirchhoff, Roger C. (A 42)
 Koerber, T. (A 51)
 Kohler, W. J. (A 54)
 Kouba, T. F. (A 54)
 Kowalke, O. L. (A 19, L 49)
 Kuehn, Mrs. Hazel (A 56)
 Larsen, Edwin M. (A 47)
 Larsen, J. A. (A 54)
 Lawton, G. W. (A 52)
 Lee, Gerhard B. (A 55)
 Leith, B. D. (L 45)
 Levi, H. W. (A 47)
 Lindner, Anton (A 55)
 Link, Karl Paul (A 44)
 Lloyd, Charles N. (A 54)
 Logan, Frederick M. (A 55)
 Longenecker, G. W. (A 54)
 Lord, C. L. (A 47)
 Lysenko, M. G. (A 54)
 McCabe, Robert A. (A 46)
 McCause, Mrs. Jessie H. (A 55)
 McCause, R. A. (A 54)
 McCoy, Elizabeth (A 29)
 McElvain, S. M. (A 29)

MADISON (Continued)

McNutt, S. H. (A 47)
 McPhee, E. R. (A 54)
 McShan, W. H. (A 53)
 Mackenthun, K. M. (A 47)
 Mahony, K. R. (A 54)
 March, H. W. (A 21)
 Marshall, D. G. (A 55)
 Marshall, W. R. (A 54)
 Marts, Ralph O. (A 46)
 Mathews, J. H. (A 19)
 Medler, John T. (A 52)
 Meloche, Villiers W. (A 29)
 Moore, J. Duain (A 56)
 Morris, W. W. (A 54)
 Mossman, H. W. (A 24)
 Muckenhirn, R. J. (A 41)
 Muegge, O. J. (A 48)
 Neess, John C. (A 53)
 Neff, G. C. (L 53)
 Neuenschwander, H. E. (A 51)
 Nichols, M. Starr (A 35)
 Nichols, R. E. (A 54)
 Noland, L. E. (A 22, L 47)
 Noland, Mrs. Ruth C. (A 53)
 O'Donnell, D. John (A 45)
 O'Hara, Dennis (A 53)
 Orsini, G.N.G. (A 54)
 Owen, Edw. E. (A 56)
 Palmeri, Joseph (A 55)
 Parsons, Helen T. (A 29)
 Paul, Benson H. (A 45)
 Penn, R. J. (A 55)
 Peterson, Arthur E. (A 56)
 Peterson, L. J. (A 56)
 Peterson, T. A. (A 54)
 Pooley, Robert C. (A 51)
 Posekany, L. A. (A 54)
 Rathbun, John W. (A 53)
 Reese, Hans H. (A 42)
 Rennebohm, Oscar (L 44)
 Reynolds, May S. (A 54)
 Rindt, K. E. (A 54)
 Ritter, Geo. J. (A 39)
 Roark, Raymond J. (A 44)
 Roberts, R. H. (A 54)
 Rohlich, G. A. (A 49)
 Sarles, Wm. B. (A 33)
 Schleck, Mat. J. (A 56)
 Schmidt, Erwin R. (A 29)
 Schneberger, Edward (A 42)
 Schoenfeld, C. A. (A 56)
 Schorger, A. W. (A 16, L 44)
 Schorger, Mrs. Margaret (A 52)
 Schubring, E. J. (A 20)
 Schubring, Mrs. Selma (A 20)
 Schuette, H. A. (A 17)
 Schuette, Mrs. Jean (A 53)
 Schwartz, Sidney L. (A 43)
 Scott, Mrs. Gertrude (A 54)
 Scott, W. E. (A 41)
 Seifert, L.W.J. (A 47)

MADISON (Continued)

Shackelford, R. M. (A 42)
 Shands, H. L. (A 55)
 Shenefeld, R. D. (A 47)
 Sieker, William E. (A 53)
 Sieker, Mrs. Wm. E. (A 55)
 Slidell, Kemper (A 44)
 Smith, Alice E. (A 54)
 Spohn, Wm. H. (A 43)
 Sprecher, G. E. (A 55)
 Stahmann, M. A. (A 54)
 Stauffer, J. F. (A 40)
 Steenbock, Harry (A 21)
 Stovall, Wm. D. (A 42)
 Supernaw, J. S. (A 44)
 Stiles, L. J. (A 55)
 Telsberg, H. O. (A 37)
 Telsberg, Mrs. H. O. (A 55)
 Thomas, Frederick L. (A 53)
 Thompson, Mrs. Noel F. (A 53)
 Thomson, J. W., Jr. (A 37)
 Threinen, Charles W. (A 54)
 Thwaites, F. T. (A 16)
 Todd, Arlie C. (A 54)
 Trenk, F. B. (A 54)
 Truog, Emil (A 21)
 Tulane, Roy G. (A 55)
 Tyler, Stanley (A 37)
 Urdang, Geo. (A 43)
 Vanderwall, E. J. (A 42)

Walker, Mrs. Edna D. (A 54)
 Walker, J. C. (A 17)
 Welsh, S. W. (A 54)
 White, Helen C. (A 32)
 White, P. G. (A 55)
 Whitley, Alvin (A 52)
 Wilde, Mrs. Martha H. (A 54)
 Wilde, S. A. (A 44)
 Wilds, Alfred L. (A 48)
 Williams, Harold Fish (A 46)
 Williams, J. N., Jr. (A 55)
 Winans, J. G. (A 46)
 Wisby, W. J. (A 56)
 Wisniewski, T. F. (A 48)
 Wittry, Warren L. (A 53)
 Wolfe, H. R. (A 32)
 Woodman, Mrs. Patricia (A 53)
 Woodman, W. J. (A 52)
 Wurster, Dale E. (A 51)
 Young, F. C. (A 52)
 Zimmerman, Fred R. (A 35)
 Zimmerman, J. H. (A 55)

MANITOWOC

Rahr, Guido (L 54)
 Vanderbloemen, H. A. (A 55)

MARSHFIELD

Hagen, Ralph (A 54)
 Laurretta, Sister M. (A 46)
 Marshfield Free Library (LB 54)

MAZOMANIE

Sorenson, D. D. (A 53)
 Sorenson, Mrs. Juanita (A 51)

MENASHA

Nelson, L. F. (A 53)

MENOMONEE FALLS

Anthony, J. D. (A 55)

MENOMONIE

Cox, Eleanor H. (A 42)
 Marshall, Anne (A 48)

MERRILL

Peroutky, J. W. (A 54)
 T.B.Scott Free Library (LB 54)

MIDDLETON

Hafstad, George E. (A 53)
 Koeppe, Robert (A 56)
 Motl, L. F. (A 55)

MILTON

Dunn, Percy L. (A 54)
 Maxson, Mrs. Melva (A 56)
 Maxson, R. H. (A 56)

MILWAUKEE

Albright, Miss M. A. (A 51)
 Abramoff, Peter (A 56)
 Baier, Joseph (A 45)
 Baier, Mrs. Joseph (A 56)
 Baltes, Jack (A 55)
 Barrett, J. M. (A 55)
 Barta, E. F. (A 32)
 Bavisotto, V. S. (A 55)
 Belknap, E. L. (A 54)
 Bever, Enid L. (A 55)
 Bostrom Foundation, Inc. (P 55)
 Karl A. Bostrom
 Chairman of the Board
 Brey, Rev. L. S. (A 55)
 Bruder, Edgar G. (A 54)
 Bubbett, Walter (A 43)

Cherry, Marianna (A 55)
 Cochran, H. Dean (A 55)
 Dahlberg, J. F. (A 56)
 Darnell, R. M., Jr. (A 56)
 Deusing, Murl (A 56)
 Devitt, Andrew B. (A 49)
 Dickinson, W. E. (A 49)
 Drescher, Milton A. (A 47)
 Evelyn, Sister Mary (A 55)
 Friedrich, Rev. L. W. (A 55)
 Frister, C. P. (A 54)
 Fuller, Albert M. (A 25)
 Gates, Charles B. (A 42)
 Gillan, A. Joseph (A 47)
 Gromme, Owen J. (A 51)
 Hainer, F. W. (A 54)
 Hainer, Mrs. Ruth D. (A 54)
 Hanawalt, Ella M. (A 32)
 Hayes, Merlin L. (A 40)
 Heun, A. L. (A 30)
 Heun, Mrs. Marie (A 52)
 Hicks, Victor (A 56)

MILWAUKEE (Continued)

Kesselman, William A. (A 45)
 Kieckhefer, Mrs. Alfred (A 54)
 Kittsley, Mrs. Helen (A 48)
 Kittsley, S. L. (A 50)
 Kneen, Eric (A 55)
 Knisely, Merton E. (A 51)
 Kruschke, Emil P. (A 40)
 Lay, Mrs. Anne B. (A 50)
 MacArthur, Kenneth (A 38)
 McDonough, E. S. (A 37)
 McKern, W. C. (A 45)
 McKern, Mrs. W. C. (A 54)
 McLoughlin, T. J. (A 54)
 Meinel, Harry (A 56)
 Miller, Miss M. A. (A 55)
 Miller, W. F. (A 55)
 Milwaukee Public Museum (LB 54)
 Myers, R. H. (A 55)

Nelson, F. H. (A 53)
 Nelson, Mrs. Kath. (A 43)
 Neumyer, W. J. (A 49)
 O'Brien, C. C. (A 50)
 O'Brien, Rev. John P. (A 50)
 Oberdorfer, Claude (A 51)
 Peloquin, S. J. (A 54)
 Pepler, H. J. (A 48)
 Perry, James C. (A 43)
 Person, P. H. (A 55)
 Peterson, W. F. (A 54)
 Polacheck, S. (A 54)

Reis, Rev. Raymond H. (A 43)
 Ritzenthaler, R. E. (A 53)
 Salamun, P. J. (A 48)
 Sand, Oliver C. (A 55)
 Saunders, John W. (A 50)
 Schroeder, Myron (A 51)
 Squier, Theo. L. (A 32)
 Steil, Wm. N. (A 19)
 Strehlow, Elmer W. (A 46)
 Studer, Sister M. Mira (A 39)
 Swendsen, Mrs. Lucile E. (A 32)

Throne, Alvin L. (A 30)
 Vogelsang, G. A. (A 55)
 Walker, Ruth (A 27)
 Washburn, R. G. (A 32)
 Werwath, K. O. (A 54)
 Whitford, Mrs. Kathryn (A 54)
 Whitford, P. B. (A 49)
 Wilson, Louis (A 56)
 Zych, Wilhelm (A 53)

MINOCQUA

Churchill, W. S. (A 45)

MONROE

Brunkow, B. H. (A 55)

MOSINEE

Hemp, Richard A. (A 54)

NECEDAH

Madura, W. H. (A 54)
 Smith, E. J., Jr. (A 55)

NEENAH

Brown, Mrs. Irene (A 54)
 Brown, Wm. J. (A 54)
 Millar, J. B. (A 54)
 Read, Wm. F. (A 53)
 Sage, Charles H. (A 53)

OCONOMOWOC

Lindsay, Ruth H. (A 29)
 Rhode, H. W. (A 29, L 47)

ONALASKA

Besch, Gordon O. (A 55)
 Peterson, Alvin M. (A 54)

OSHKOSH

Buckstaff, Mrs. Annie L. (A 52)
 Buckstaff, R. N. (A 22, P 54)
 Conservation Dept.
 (Fisheries) (LB 54)
 Gordon, Sid W. (A 56)
 Hoffmaster Co., Inc. (S 55)
 Marble, David P. (A 55)
 Marble, Vela Lynn (A 55)
 Pfefferkorn, E. B. (A 40)
 Public Library (LB 54)
 Public Museum (LB 54)
 Reed, G. G. (A 54)
 Steiger, Carl (P 54)
 Talbot, H. W. (A 40)
 Unger, James W. (A 53)

PLAINFIELD

Hamerstrom, F. N., Jr. (A 53)
 Hamerstrom, Mrs. F. (A 56)

PLATTEVILLE

Goder, Harold A. (A 52)
 Martin, Ella M. (A 48)
 Newlun, C. O. (A 48)
 Smith, W. N. (A 42)
 Zellmer, Luther A. (A 41)

PORT EDWARDS

Kilp, F. George (A 54)
 Tinglum, Jahn H. (A 55)

PORTAGE

Packard, R. L. (A 54)

POYNETTE

Becker, Geo. C. (A 42)

PRAIRIE DU CHIEN

Scott, Rev. John M. (A 54)

RACINE

Cameron, Donald H. (A 33)
 Colvin, Clair (A 55)
 Esser, Robert E. (A 47)
 Fraser, Miss M. S. (A 55)
 Gunlogson, G. B. (A 46, L 48)
 Hultman, Richard (A 55)
 Taube, E. (A 55)
 Tietze, F. I. (A 55)
 Tietze, Mrs. A. M. (A 55)
 Vozza, John F. (A 55)

RIPON

Barber, W. H. (A 12, L 51)
 Conant, G. H. (A 33)
 Hagquist, Carl W. (A 52)

RIPON (Continued)

Kohl, E. J. (A 42)
 Limback, John P. (A 48)
 Miller, G. H. (A 55)
 Pinkham, Fred O. (A 56)
 Pinkham, Mrs. Helen (A 56)

RIVER FALLS

Kettelkamp, B. H. (A 54)
 Lieneman, Miss C. (A 54)
 Muto, Peter (A 54)
 Setterquist, T. (A 54)

ROTHSCHILD

Abrams, Allen (A 42)

SARONA

Bailey, Robert (A 54)

SHEBOYGAN

Mead Public Library (LB 54)
 Prislant, Mrs. Marie C. (A 54)
 Steinberg, Charlene (A 55)
 Stiles, Mrs. Elsa (A 55)
 Weill, J. L. (S 55)

SPENCER

Reinholz, E. G. (A 54)

SPCONER

Conservation Dept.
 (Fisheries) (LB 54)

SPRING GREEN

Wright, Frank Lloyd (H)

STEVENS POINT

Bukolt, V. J. (A 55)
 Pierce, B. R. (A 54)
 Schmeeckle, F. J. (A 54)
 Sylvester, W. R. (A 48)

STURGEON BAY

Herlacke, C. H. (A 55)

SUPERIOR

Akers, Dana K. (A 55)
 Akers, Mrs. Helen L. (A 55)
 Anderson, H. W. (A 54)
 Bolender, E. L. (A 32)
 Cooper, Berenice (A 37)
 Gradin, Robert W. (A 54)
 Seguin, Hazel A. (A 42)

SUSSEX

Neidhoefer, J. R. (A 36)

TIGERTON

Swanke, H. R. (S 55)

VERONA

Monthey, L. G. (A 54)

WAUKESHA

Carroll College Library (LB 45)
 Christoph, R. J. (A 54)
 Richason, E. F., Jr. (A 55)
 Weber, Milton (A 55)

WAUSAU

Armitage, K. B. (A 54)
 Hanley, L. W. (A 55)
 Onheiber, Jerome (A 55)
 Steuber, R. (A 55)

WAUWATOSA

Bostrom, Karl A. (S 55)
 Evans, Clarence T. (A 21)
 Lamers, Wm. (A 39)
 McCoy, W. D. (A 55)
 Neumann, A. P. (A 54)
 Reyer, Harold B. (A 45)
 Warner, E. D. (A 49)
 Wiegand, Phillip A. (A 53)
 Zillmer, R. T. (A 54)

WEST DE PERE

Keefe, Rev. Anselm M. (A 27)

WESTFIELD

McFadden, J. T. (A 55)

WHITEWATER

Carlson, P. A. (A 55)
 Chopp, Joseph J. (A 37)
 Grant, G. P. (A 54)
 Lahti, Hugo E. (A 54)
 Meyer, Mrs. Dorothea (A 55)
 Meyer, Henry (A 48)
 Prucha, R. W. (A 54)
 Williams, E. J. (A 54)

WILLIAMS BAY

Van Biesbroeck, G. (A 27)

WISCONSIN DELLS

Van Antwerp, Fidelia (A 54)

WISCONSIN RAPIDS

Brener, W. H. (A 54)
 Underwood, N. B. (A 54)

WOODFORD

Eastwood, John P. (A 51)

WOODRUFF

Conservation Dept.
 (Fisheries) (LB 54)
 Oehmcke, A. A. (A 55)

- - - -

O U T O F S T A T EALABAMA

Barker, A. L. (A 34)
 Auburn

CALIFORNIA

Bradley, H. C. (A 08, L 49)
 Berkeley
 Dever, D. A. (A 53)
 Berkeley
 Goethe, C. M. (A 53)
 Sacramento
 Kroeber, E. B. (A 54)
 Los Angeles
 Storey, O. W. (A 42)
 Santa Barbara
 Traak, P. D. (A 46)
 Berkeley
 Wilson, H. F. (A 16, C 51)
 La Canada

CONNECTICUT

Blanshard, R. A. (A 53)
 Storrs
 Davis, N. T. (A 55)
 Storrs

CONNECTICUT (Continued)

Frasche, Dean F. (A 37)
Greenwich
Voigt, G. K. (A 49)
New Haven
Wilbur Cross Library (LB 51)
U. Conn., Storrs

DISTRICT OF COLUMBIA

Bertrand, Kenneth C. (A 37)
Doolittle, Sears P. (A 33)
Jackson, H. H. T. (A 10, L 50)
Lenroot, Miss K. (H)
Middleton, W. S. (A 36)
Wetmore, Alexander (H)
Winslow, C. P. (A 42)
Wright, Stillman (A 27)

FLORIDA

Dahm, Robert E. (A 51)
Tampa
Denniston, R. H. (A 05, L 48)
Winter Park

GEORGIA

Nevins, Beatrice I. (A 29)
Valdosta
Stoddard, Herbert L. (A 42)
Thomasville

ILLINOIS

Burgess, Jackson (L 45)
Chicago
Bergseng, Mrs. M. S. (A 54)
Urbana
Cull, Irene M. (A 47)
Peoria
Hall, N. F. (A 34)
Lamont
Kossack, C. W. (A 55)
Barrington
Schlaeger, A. J. (A 47)
Chicago
Sedman, Yale (A 53)
Macomb
Stewart, Duncan J. (A 48)
Rockford

INDIANA

Orpurt, Philip A. (A 51)
North Manchester

IOWA

Errington, Paul (A 33)
Ames
Ferris, Deam H. (A 47)
Lamoni
Iowa State Teachers College
Cedar Falls (LB 55)
Robinson, W. Merle (A 45)
Mt. Pleasant

KANSAS

Blocher, Rev. R. B. (A 52, C 53)
Eureka
Sperry, Theo. M. (A 37, C 50)
Pittsburgh

LOUISIANA

Suzuki, Howard K. (A 47)
New Orleans

MARYLAND

Drechsler, Charles (A 19)
Beltsville
Steiner, Gotthold (A 23)
Mt. Ranier

MASSACHUSETTS

Forbes, Esther (H)
Worcester
Mead, W. J. (A 11, L 51)
Belmont
Seymour, Rev. F. C. (A 49)
Dighton

MICHIGAN

Bjorklund, Mrs. M. C. (A 53)
Ann Arbor
Curry, Laverne L. (A 53)
Mt. Pleasant
Durkin, Joseph T. (A 54)
Marquette
Eggleton, F. E. (A 36)
Ann Arbor
Hile, Ralph (A 32)
Ann Arbor
Jeserich, M. W. (A 47)
Big Rapids
Sauer, J. D. (A 52)
Ann Arbor
Schorger, W. D. (L 54)
Ann Arbor

MINNESOTA

Davis, E. W. (L 45)
St. Paul
Marshall, A. M. (A 54)
Red Wing
Marshall, Mrs. A. M. (A 54)
Red Wing
Noland, W. E. (A 50)
Minneapolis
Stoeckler, J. H. (A 55)
St. Paul
Wadmond, S. C. (A 03, L 47)
Minneapolis

MISSOURI

Haberman, W. O. (A 47)
Webster Groves
Whitehead, Marvin D. (A 50)
Columbia

NEW HAMPSHIRE

Pierce, R. S. (A 53)
Laconia

NEW YORK

Davey, C. B. (A 53)
Rochester
Dodge, E. O. (A 12, L 51)
New York
Frey, Charles N. (A 22)
Scarsdale
Gloyer, W. O. (A 08, L 50)
Geneva

NEW YORK (Continued)

Klak, George E. (A 32)
 Brooklyn
 Mader, Donald L. (A 53)
 Gloversville
 Marquette, W. G. (A 44, L 50)
 Pleasantville
 Neuman, A. K. (A 51)
 New York
 Reynolds, Edw. D. (A 54)
 New York
 Stout, Arlow B. (A 41, L 49)
 Pleasantville
 Tiedeman, Henry (L 55)
 New York

NORTH CAROLINA

Dogger, James R. (A 50)
 Raleigh

NORTH DAKOTA

Gjmerac, W. L. (A 54)
 Fargo

OHIO

Bartsch, A. F. (A 45)
 Cincinnati
 Catenhusen, J. (A 43)
 Steubenville
 Cleveland Public Library (LB 55)
 Cleveland

OKLAHOMA

Tomlinson, C. W. (A 21, L 45)
 Ardmore

OREGON

Oregon State College Library
 Corvallis (LB 50)

PENNSYLVANIA

Reed, G. M. (A 05, L 48)
 Pittsburg
 Sharp, Terry (A 53)
 Pittsburg

RHODE ISLAND

Browning, H. W. (A 20)
 Kingston
 Snell, Walter H. (A 19)
 Providence

SOUTH DAKOTA

Vaughn, C. M. (A 48)
 Vermillion

TENNESSEE

Durand, Loyal, Jr. (A 35)
 Knoxville

TEXAS

Jones, Robert H. (A 54)
 Kerrville

VERMONT

Erickson, Phoebe (A 55)
 Woodstock

VIRGINIA

Van Engel, W. A. (A 46)
 Gloucester Point
 Wing, Monta E. (A 36)
 McLean

WASHINGTON

Buss, Irven O. (A 42)
 Pullman

HAWAII

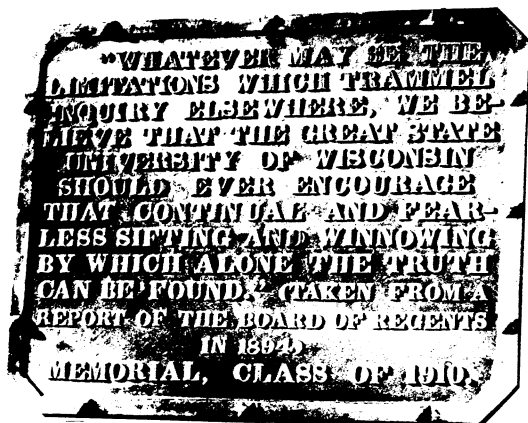
Ekern, Paul C. (A 50)
 Honolulu

C A N A D A

Nero, R. W. (A 54)
 Regina, Sask.
 Wiseman, I. H. (A 55)
 Winnipeg, Man.

S u m m a r y

Academy membership represents
 87 Wisconsin communities,
 31 other states, Hawaii and
 Canada



WISCONSIN ACADEMY COUNCIL MEETING

By Robert J. Dicke, Secy.-Treas.

Following a luncheon at the University Club, Madison, on March 24, 1956, a meeting of the Academy Council was called to order by President J. G. BAIER, Jr. at 1:15 p.m. Council members present were J. G. BAIER, Jr., S. F. DARLING, R. J. DICKE, C. L. FLUKE, R. H. IRRMANN, O. L. KOWALKE, W. C. McKERN, L. E. NOLAND, A. W. SCHORGER, H. A. SCHUETTE, and by invitation, R. A. McCANSE, Publications Committee, W. E. SCOTT, Editor, Wisconsin Academy Review, and J. W. THOMSON, Jr., Chm. Junior Academy of Science.

Important items of business transacted or discussed were as follows:

1. Finances and investments of the Academy were discussed. The Treasurer reported that three-fourths of the 1956 dues have been collected and that only 15 Active members are in arrears in dues for a two-year period.

2. The following amendment to (8) of the By-Laws of the Constitution was proposed: "An Editor of the TRANSACTIONS will be appointed by the Council, who shall be responsible for editing and overseeing its publication. In the performance of this duty he shall be advised by the Committee on Publications." By-Law (8) presently reads as follows: "The secretary-treasurer shall be charged with the special duty of editing and overseeing the publication of the TRANSACTIONS. In the performance of this duty he shall be advised by the committee on publication."

3. A committee of R. A. McCANSE, W. E. SCOTT and the Secretary-Treasurer was appointed by the President to secure an Editor for the TRANSACTIONS.

4. Progress reports were heard on the campaign of the Membership Committee, by the Editor of the Review, and the Chairman of the Junior Academy of Science.

5. A Nominations Committee composed of C. L. FLUKE, Chm., A. W. SCHORGER and R. H. IRRMANN was appointed by the President.

6. J. W. THOMSON reported that the TRANSACTIONS will be considered for financial support from the Norman C. Fassett Memorial Fund to encourage publication of papers in field botany.

7. The proposal to hold joint annual meetings with other Wisconsin Associations was discussed but not considered feasible.

8. Responsibility for the disposition of past records was left with the Secretary.

9. The following applications of new members were unanimously received by the Council:

(Reported in previous issues)

Sustaining - JAMES R. HABECK

Active - PETER ABRAMOFF

ENID L. BEVER

LAWRENCE S. BREY

E. L. CHAMBERS

R. J. COLBERT

MURL DEUSING

HUGH H. ILTIS

ANTON LINDNER

FREDERICK M. LOGAN

DOUGLAS G. MARSHALL

JAMES T. McFADDEN

GORDON H. MILLER

MARJORY A. MILLER

D. JOHN O'DONNELL

JOSEPH PALMERI

PHIL SANDER

ELSA STILES

H. A. VANDER BLOEMEN

JESSE N. WILLIAMS, JR.

WARREN J. WISBY

Library - WISCONSIN STATE COLLEGE, La Crosse
CLEVELAND PUBLIC LIBRARY, Cleveland, Ohio

(New this issue)

Active - O. J. ATTOE, Univ. of Wisconsin, Madison
 MYRON P. BACKUS, Univ. of Wisconsin, Madison
 Mrs. JOSEPH BAIER, Milwaukee
 JACK BALTES, Globe-Union, Inc., Milwaukee
 HASKELL M. BLOCK, Univ. of Wisconsin, Madison
 CAROL J. BUTTS, Univ. of Wisconsin, Madison
 GERMILLE COLMANO, Univ. of Wisconsin, Madison
 CHARLOTTE M. CYZAK, Univ. of Wisconsin, Kenosha
 JOHN F. DAHLBERG, Wis. Electric Power Co., Milwaukee
 REZNERT M. DARNELL, Jr., Marquette Univ., Milwaukee
 WILLIAM J. DRESCHER, Univ. of Wisconsin, Madison
 HAROLD A. ENGEL, Univ. of Wisconsin, Madison
 MARK J. FAY, Wis. State College, Eau Claire
 JOHN B. GERBERICH, Wis. State College, Eau Claire
 SID W. GORDON, Oshkosh
 GLENN E. HAAS, Univ. of Wisconsin, Madison
 FRANCES HAMERSTROM, Plainfield
 CHARLES F. HARTLEY, Univ. of Wisconsin, Madison
 VICTOR HICKS, Allen-Bradley Co., Milwaukee
 LOUIS KAPLAN, Univ. of Wisconsin, Madison
 HAZEL KUEHN, Legis. Ref. Library, Madison
 ROBERT KOEPPEN, Middleton
 MELVA MAXSON, Milton
 R. H. MAXSON, Milton
 HARRY MEINEL, Univ. of Wisconsin, Milwaukee
 J. D. MOORE, Univ. of Wisconsin, Madison
 A. A. OEHMCKE, Conservation Dept., Woodruff
 EDWARD E. OWEN, Conservation Dept., Madison
 ARTHUR E. PETERSON, Univ. of Wisconsin, Madison
 LEROY J. PETERSON, Univ. of Wisconsin, Madison
 FRED C. PINKHAM, President, Ripon College, Ripon
 HELEN PINKHAM, Ripon
 MAT J. SCHLECK, State Dept. Public Welfare, Madison
 CLARENCE A. SCHOENFELD, Univ. of Wisconsin, Madison
 LOUIS F. WILSON, Marquette Univ., Milwaukee

Library - IOWA STATE TEACHERS COLLEGE, Cedar Falls, Iowa

To March 24, 1956, our membership is as follows:

Patron	3	Active (family)	37		
Life	26	Corresponding	3	TOTAL	671
Sustaining	8	Library	19		
Active	571	Honorary	4		

10. The Secretary-Treasurer submitted his resignation which was accepted by the Council to be effective after the Annual Business Meeting of May 4, 1956.

The meeting adjourned at 4:00 p.m.

#

ACKNOWLEDGMENTS:

P. 60, sketches of ducks from Plate VI, Guide to Game Birds by Edmund J. Sawyer, 714 - 3rd st. S, Kirkland, Wash. (50¢)

P. 70, sketch of crickets from St. Nicholas Magazine, Nov. 1879.

CORRECTION:

Winter, 1956 issue, p. 18: In photo caption names of CHESTER O. WANVIG of Milwaukee and CARL E. STEIGER of Oshkosh should be reversed.

OFFICERS OF THE WISCONSIN ACADEMY OF SCIENCES, ARTS AND LETTERS

PRESIDENT

Joseph G. Baier, Jr.
UW Extension Div., Milwaukee

VICE-PRESIDENT (SCIENCES)

Stephen F. Darling
Lawrence College, Appleton

VICE-PRESIDENT (ARTS)

Aaron Bohrod
UW Artist-in-Residence, Madison

VICE-PRESIDENT (LETTERS)

Robert H. Irrmann
Beloit College, Beloit

SECRETARY-TREASURER

Robert J. Dicke, UW, Madison

LIBRARIAN

Gilbert H. Doane, UW, Madison

COUNCIL

	Past Presidents:
The President	Paul W. Boutwell
	A. W. Schorger
The Vice-Presidents	H. A. Schuette
	L. E. Noland
The Secretary-Treasurer	Otto L. Kowalke
	W. C. McKern
The Librarian	E. L. Bolender
	Katherine G. Nelson
	C. L. Fluke
	Ralph N. Buckstaff

COMMITTEES

Publications:

The President, ex officio
The Secretary, ex officio
Ralph A. McCanse

Membership:

James Perry, Chm.	Walter Sylvester
C. L. Fluke	R. J. Dicke
Don Schlafke	

REPRESENTATIVE ON THE COUNCIL OF THE A.A.A.S.:
Robert J. Dicke, University of Wisconsin

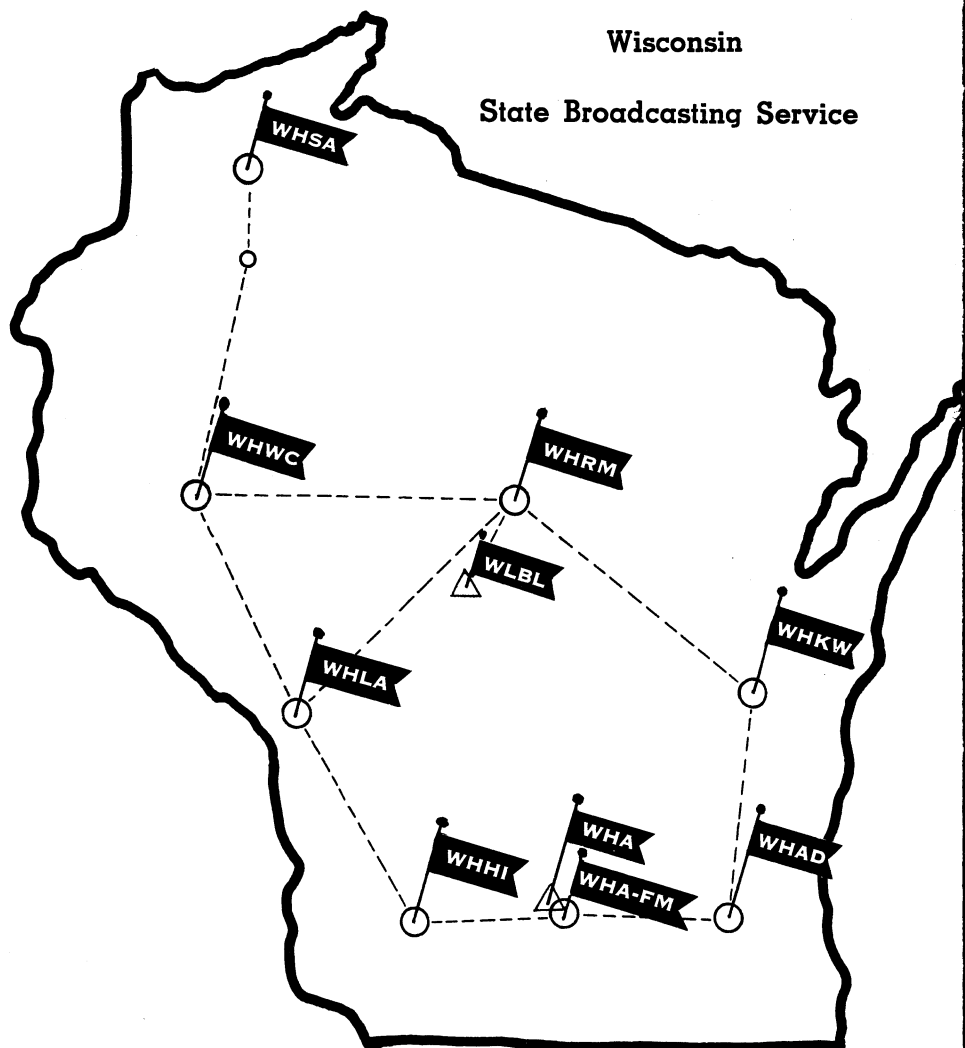
CHAIRMAN, JUNIOR ACADEMY OF SCIENCE

John W. Thomson, Jr., University of Wisconsin

EDITOR, WISCONSIN ACADEMY REVIEW

Walter E. Scott, Madison

Wisconsin State Broadcasting Service



DAYTIME AM STATIONS:

WHA—Madison, 970 Kc.
WLBL—Auburndale, 930 Kc.

DAY & NIGHT FM STATIONS:

WHA-FM—Madison, 88.7 mc.
WHAD—Delafield, 90.7 mc.

WHKW—Chilton, 89.3 mc.

WHRM—Rib Mountain, 91.9 mc.
WHWC—Colfax, 88.3 mc.

WHLA—West Salem, 90.3 mc.

WHHI—Highland, 91.3 mc.
WHSA—Brule, 69.9 mc.