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SUMMER 1967

WISCONSIN ACADEMY REVIEW

The Wisconsin Academy of Sciences, Arts and Letters

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WISCONSIN ACADEMY REVIEW

Volume 14, Number 2 **Summer 1967**

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YOUR MEMBERSHIP will encourage research, discussion and publication in the various areas of the sciences, arts and letters for the benefit of all the citizens of Wisconsin.

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Guest Editorial

A MATTER OF DIGNITY

The present generation of the human population finds itself confronted with a vast problem of enormous complexity in the deterioration of its environment. Although this problem seems to have burst upon us all of a sudden, it has been accumulating for many years, and a few voices have been protesting for years without significant audience. The change is following a predictable curve based upon compound interest laws. It reflects primarily the logarithmic rate of population increase and the logarithmic increase in technology, with occasional jumps after major discoveries.

The primary concern of the scientist is that the human species does not at present know enough to assess, with any real degree of satisfaction, the long-term effects of its despoilation of nature. That we are still creatures of nature is absolutely clear, and to those who are most fully informed we are on the brink of major tragedy, although it is still debatable as to which calamity will befall us first. Aside from the major, and to some extent foreseeable dangers, there is a host of more subtle ones, some of which may be of great importance.

All evidence points to the fact that our native species of plants, animals, and microbes are dwindling in abundance, and numerous species are known to have vanished or to be in severe danger as a result of the activities of mankind. It is clear that man is a part of the chemical cycles of nature and that any agents which seriously interfere with the nitrogen, carbon, phosphorus, etc. cycles will result in dramatic adverse effects upon the human population. It is equally clear that wildlife diversity is a national resource of immense value from which will be derived products of economic value, drugs to cure human ailments, and genetic material for crop and livestock improvement. Reduction of this resource will surely impoverish the environment of our children and threaten their chances of correcting the errors of our generation.

Although an indisputable case can be made that the future of mankind on this planet depends upon his maintaining a balanced harmony with nature, isn't there something more? Isn't there a matter of ethics involved? Is the human population so calloused that it will knowingly torture other creatures with its sewage and filth and leave the individuals, and indeed whole species, to die out? Maybe the scientist is himself at fault. Perhaps he who senses the suffering of nature and who knows the date and hour of the passing of the last prairie turnip must turn philosopher and make the ethical case in public forum.

Let us now make the case.

a) The thread of life (DNA) is common to all living creatures, and all are related to one another by common ancestry.

b) All living organisms are sensitive to stimuli and respond to them either positively or negatively. Although we know that pain and suffering are not uniquely human sensations, we are not sure how widespread the ability to perceive unpleasantness really is. There is no real evidence that the ability to suffer is less intense among lower forms than among higher ones, and sickness is common at all levels.

c) As far as we know, the human species is uniquely capable of contemplating the suffering of others. Man is also in the historically unique position of being able to control not only his own environment, but that of his fellow species, as well, a position that carries with it a dreadful responsibility.

d) If it is ethically good for humans to feel concern for fellow humans, then it follows that it is also ethically right for humans to be concerned about the welfare of their non-human relatives. All life is one, and what is called for is an extension of the Golden Rule to cover man's relations with all living creatures. In his book, *Memoirs of Childhood and Youth,* Albert Schweitzer spoke to this point as follows, " . . . there slowly grew up in me an unshakable conviction that we have no right to inflict suffering and death on another living creature unless there is some unavoidable necessity for it, and that we ought all of us to feel what a horrible thing it is to cause suffering and death out of mere thoughtlessness. And this conviction has influenced me only more and more strongly with time."

The measure of human dignity is where one stands on matters of ethical conviction. Is not the dignity of the human race reflected in its policy toward its non-human relatives?

By Rezneat M. Darnell

THE NEW UNIVERSITY EXTENSION

IN WISCONSIN

By Donald R. McNeil

FOR THE PAST two years, some 1,000 faculty and staff members of University Extension, the University of Wisconsin, have been carrying double assignments. While handling their regular work in every geographic area and nearly every aspect of life in Wisconsin, Extension people have also been building, testing, and proving a new model for extension programming in the American university.

Important to the people of this state because it introduces new patterns and new dimensions of public service from the UW, the new model also has nation-wide significance because it illustrates one way of handling a prevalent problem.

The new University Extension is Wisconsin's response to pressures forcing all universities to reappraise their means for extending academic resources beyond the campus. Shifting demographic patterns, pressing social problems, individuals' new needs and goals, increasing federal support—all demand new approaches, new talent, new types of extension mechanisms which can accommodate both new problems and new potential.

For many universities, particularly those with both general and agricultural extension units, coordinating or merging extension programming is central to meeting new demands. In the early 1960's, merging the UW's three traditional arms of outreach was chosen as the best alternative for restructuring extension activities here. A merger, the planners felt, could sharpen the UW's problem-solving focus and implement an interdisciplinary approach for attacking simultaneously several facets of complex problems like poverty. It was also felt that extending all the resources of the university, regardless of the department, college, school, or campus where they are lodged, could best be served by centralizing responsibility for extension programming in one unit.

Chaired by Ralph Huitt, now undersecretary of the U.S. Department of Health, Education, and Welfare and then UW professor of political science, a faculty committee studied the proposed reorganization for two years. The group reported to the Board of Regents in August, 1965, and recommended forming one unit which could serve the people of Wisconsin, "rural, urban, and suburban alike."

This unit, called University Extension, entered the UW organization on October 22, 1965, when the Regents appointed a chancellor to head it. The following June, Professors Henry Ahlgren, Associate Director of the Cooperative Extension Service (CES),

and George B. Strother, Chairman of Extension Commerce, were named Assistant Chancellors.

As do the chancellors of the Madison and Milwaukee campuses, the 11 Center campuses and the two new campuses in Green Bay and Southeastern Wisconsin, the chancellor of University Extension reports directly to the UW president. By establishing close internal administrative ties, the University again reaffirmed its traditional stand for emphasizing extension along with teaching and research.

What came into the merger and what it was expected to yield were equally staggering prospects at the outset. The success of the merger depended on blending three separate traditions of some 50 years each into one. Behind these traditions were three of the strongest outreach programs in the country. The UW Extension Division was the first general extension mechanism to be built into an American university. Since the early 1900's it has been serving hundreds of thousands of Wisconsin people through management institutes, conferences, special classes, and correspondence instruction.

The College of Agriculture and Wisconsin counties had developed the Cooperative Extension Service into one of the foremost services to agriculture and rural life in the country.

"The oldest station in the nation," WHA radio, even came into the merger. Staffing and programming WHA is one of the responsibilities of the Division of Radio-Television, another component of University Extension.

The combined budgets of the three operating units totaled $14 million, administered through three different business offices. Particularly troublesome—and still to be resolved—was the disparity in financing between the Extension Division and CES. Financed cooperatively by federal, state, and county funds, the CES has traditionally been able to offer its services free. The Extension Division, on the other hand, has traditionally worked with a principle of self-support established by the Wisconsin legislature and currently fixed at 66-2/3 per cent. While some kinds of University Extension programs can be offered free, others must raise enough income to meet the self-support requirement of raising two dollars for every one received in state funds.

To complicate things further, Extension people were scattered geographically throughout the state. Budgetarily, they were scattered throughout some 100 operating units and academic departments on the UW's 13 campuses.

The most significant thing about University Extension in 1967 is that the present operation squares with its 1965 job description. Components of the new University Extension continued working at capacity, then stepped up their efforts in new directions as coordinated programming began to mesh through the new mechanism.

UNIVERSITY Extension has two major goals: **providing educational opportunity for adults of varying vocational and educational backgrounds and applying University resources to help solve society's educational, environmental, and economic problems. Three major program divisions of Extension, all accommodating a problem focus and an interdisciplinary approach, implement these goals.**

The Division of Liberal and Professional Education, Prof. Harold Montross, Dean, has 36 departments. They include such varied disciplines as languages, veterinary science, medicine, pharmacy, nursing, law, library science, engineering, and mathematics. In the past year, programs offered by this division for doctors and others in allied health services drew 3,100 participants. Nursing education programs reached 2,000 people; pharmacy education, 1,500. By attending special classes available to them around the state, 2,500 teachers and administrators continued their professional work. More than 12,000 people attended engineering institutes. Lawyers and veterinarians have also participated in professional education programs, many of them emanating in Madison and offered locally by telephone or radio.

Particularly illustrative of the merger is the Division of Economic and Environmental Development. Headed by Dean Gale VandeBerg and including some of the strongest programs from both CES and general extension, the division's concerns include commerce, farm management and agricultural production and marketing.

This unit also has responsibility for University Extension's work in natural resources, and general extension and cooperative extension competencies come together particularly profitably here. Specialists in such areas as horticulture, recreation and touristry, landscape architecture, law, and wild life management have joined forces to explore the problem. Last spring, Extension specialists in commerce, touristry and recreation, resource development, and home economics met with representatives of the tourism industry to determine new ways in which the university can help. University Extension is also taking an active role in the UW's new conservation program and is helping in 33 ways to implement Wisconsin's new Water Resources Act. An active program in land-use education is under way, and Extension specialists are helping communities capitalize on natural resources without destroying them by over-commercialization.

Traditional strengths in serving industry and agriculture continue. In the last year and a half, Extension Commerce has nearly quadrupled its program offerings, has increased its area coordinators out in the state from three to five, and has worked harder to help owners of small business. Commerce has also moved into the extension poverty program, in the belief that increasing entrepreneurial skills is one of the best routes to equalizing economic opportunity.

Extension agricultural production and marketing programs are helping wipe out brucellosis, boost the turkey industry, teach management to young farmers, improve the quality of pork, and computerize soil

Photo by Bill Schropp

Linking the Madison campus with 84 listening stations in Wisconsin hospitals, courthouses, and University Centers in 41 counties, Extension's educational telephone network is particularly useful for professional education programs. Rose Marie Chioni (left), assistant professor of nursing at the UW, and Mrs. Signe Cooper, chairman of Extension Nursing, discuss new nursing techniques in one of 150 programs offered by educational telephone. In the past year, some 13,000 nurses, doctors, pharmacists, lawyers, librarians, engineers, music teachers, veterinarians, and social workers have participated.

testing reports. Marketing and utilization specialists are exploring world-wide markets for concentrated milk products, training agri-business leaders, and working in other ways to keep Wisconsin leading the nation in beef and dairy production.

The Division of Human Resource Development is another good example of the merger at work. Lodged here are such Extension Division units as the Institute for Governmental Affairs and the School for Workers along with agricultural units like 4-H and Youth and Home Management and Family Living. So is major responsibility for Extension's strong anti-poverty program. Dean of this unit is Prof. Glen C. Pulver.

Under a grant from the U.S. Office of Economic Opportunity, Extension has established a Center for Action on Poverty which has trained some 100 VISTA volunteers, 250 community action workers, 100 rural community action technicians, and many Head Start teachers. A report on Extension's work with poverty in Milwaukee won the national Adult Education Association's best case study award. Human Resource Development's service to youth ranges from working with Wisconsin's 65,000 4-H'ers to helping develop the educational program for the Job Corps Center at Camp McCoy near Sparta. A task force established to study problems of the aging illustrates the breadth of resources which can be focused on one area. On the task force are specialists in social work, nursing, political science, physical education, resource development, home management, and from The School for Workers.

In addition to the three programming divisions, Extension also has three units working to take offerings statewide. The Division of Community Programs has 275 professional staff members distributed among Wisconsin's 72 counties and 11 Center campuses and 47 staff members with area-wide responsibilities for several counties. Combined in this unit, with Robert Dick as director, are the CES county agents and the field men of the former Extension Division. Also in this division are home economists in each of the 72 counties, emphasizing consumer education, helping low income mothers, teaching families how to budget, and generally contributing to the quality of life in their communities.

The Division of Radio-Television, in addition to staffing and programming WHA radio throughout the state and WHA-TV in the Madison area, also contributes substantially to the Extension continuing education program in other ways. Many lectures carried to professional people over 84 educational telephone receivers in 41 Wisconsin counties and over special radio receivers emanate from Radio Hall on the Madison campus. Staff members also produce the Wisconsin School of the Air. Heard by more than 300,000 Wisconsin school children annually, the School of the Air is one of 15 programs offered to Wisconsin schools by radio or television. One of his former students, James Robertson, succeeded Prof. H. B. McCarty as director last February.

Conferring with their University Extension representatives on subjects ranging from crop yields and marketing to family budgeting is a familiar pattern for Wisconsin farmers. In one year, Extension staff in 72 Wisconsin county offices consulted with half a million individuals and 54,000 organizations, distributed two million publications, and produced 21,000 radio broadcasts and 1500 telecasts.

Developing new curricula and new ways of teaching off campus is the responsibility of the Division of Instructional Media, headed by Charles A. Wedemeyer. Learning opportunities go statewide through publications, a strong independent study program, and the increasingly popular Articulated Instructional Media (AIM) program combining several forms of independent study. This division is currently developing portable equipment to facilitate home study in the physical and natural sciences and exploring the possibilities of communications satellites and slow scan television for continuing education.

THE COMBINED efforts of these six divisions take University Extension into nearly every area of endeavor in the state and into cooperating with most of the other organizations and institutions, private and public, at work in Wisconsin. Extension works in women's education, improving highway safety, in training law enforcement personnel, school board members, members of state and local government units, labor union members and officials, corporation executives, and clergy.

A recent summary of Extension services to minority groups ran 25 pages. Compiling a year's requests for Extension services from groups outside the university ran to 85 pages single-spaced.

And there is more to be done. Extension is currently launching new efforts to seek funds from the federal government and foundations to add to the $3.5 million already in hand in contracts and grants. These funds will help realize another major goal: going farther in literally taking the university to the people, particularly in the northern counties. Advances in technology will also serve this goal. For example, the whole area of educational television is receiving unprecedented national support and attention, and the University Extension educational television program will keep pace.

There is the need for constant re-evaluation to make sure that all groups of the state are served equally well: urban and rural, lower income and higher, the young and aging as well as the middle-aged, owners of small businesses as well as corporation staffs.

New skills must be added to University Extension, and present competencies up-dated. A staff training and development unit is tackling these problems.

Last April, University Extension, along with Marquette University and the University of Wisconsin-Milwaukee, was honored by the Milwaukee B'Nai B'Rith Councils for its work in the city. Extension was cited for "taking its resources of knowledge and skill and its commitment to human betterment to those places in the city where people live and work; for meeting the needs of the deprived, for accepting the difficult challenge of intellectual confrontation with the complex problems of the metropolis; for striving toward the goal of making the city a better place to live."

Substitute "society" for "the city" and "the metropolis" and you have a statement of mission for the new University Extension in Wisconsin.

VISITING SCIENTISTS

A Wisconsin Academy project bringing college and university scientists into the high school classroom

By Barbara Kuhlen

A chance . . . for high school students to gain information normally unobtainable; for teachers to talk to and learn from college-oriented people; for college professors and instructors to reach out beyond the college classroom and laboratory to young initiates in science . . .

The Wisconsin Visiting Scientists Project has taken these chances in this last year. It has placed the opportunity for real "extra-curricular" learning in the hands of those high school students who need and want it most. If the Project had reached only a few high schools, instead of the 74 it did reach, it would have been worth it. The reports are nearly unanimous in commending it: "Wonderful" "A real opportunity" "We are so pleased" "Thank you so much".

The Project was initiated in 1965, when the Academy and the Junior Academy requested funds from the National Science Foundation. After the original paperwork was over, the Junior Academy found on its hands responsibility for originating, organizing, and administering a $7,000 NSF grant. To be included were 100 visits to various high schools throughout the state by many college professors specializing in the areas of biology, physics, mathematics, chemistry, and earth sciences.

In late July 1966, the final push began—brochures, information to schools and to "visitors", records and forms were prepared and sent to all interested. The response was overwhelming—102 professors and instructors indicated their willingness to serve. Nearly every state

university and most center system campuses were represented, in addition to The University of Wisconsin and the UWM, and several private colleges. With this heartening response, the Director went ahead and sent informative brochures to every science teacher in the high schools of Wisconsin.

The goals of the Project were to strengthen, stimulate and enrich the science and mathematics programs of Wisconsin public and private secondary schools; to develop an awareness on the part of teachers and students of the importance of being scientifically literate; to arouse increased interest in science and mathematics among secondary students; to provide opportunities for teachers and students to meet productive and creative scientists and mathematicians; to encourage communication and stimulate cooperation among secondary schools and scientists and mathematicians; to give scientists and mathematicians an opportunity to observe the problems of science and mathematics instruction at the secondary school level; and to aid in the motivation of able secondary school students toward careers in science and mathematics.

The Project in its first year indeed appeared successful—a total of 78 visits had been made, by 57 scientists to 74 schools!

One of the basic premises of the Project was that the school should handle as much of the detail of the visit as possible. The Project Office made the initial contact of the visitor after receiving the school's request, informing the visitor that a request had been received in his area, and checking the dates requested. Information, including some procedural data, the name and address of the school, and report forms for return to the Project Office after the visit, was sent to the visitor; at the same time the school received the name and address of the visitor and the same type of procedural data and report forms. This was the extent of the planning and contact for which the Office was responsible. The school was urged at this time to contact the visitor quickly, and to make as many plans as possible well in advance of the visit.

After the school and the visitor had been contacted, and the visitor had received a formal invitation from the school, the Project Office had little to do with the arrangements. Included in each school's information packet was a short "vita" of the selected scientist to help them prepare for the visit. As is to be expected, some schools did an excellent job of planning and preparing students and teachers for the visitor; some did very little. Several schools invited parents and interested townspeople to the school for the visit. Many made detailed agendas for the day. Those schools which did the most planning and made the best use of the available pre-visit time regarding arrangements definitely had the most successful visits. From the visitor's and the school's reports, the advance planning was considered the most important to the success of the visit.

Schools requesting visits ranged all the way from a small, two-community, rural "union" school to a large high school in the heart of Milwaukee. The Office method for choosing schools was based largely on opportunity; several schools which had received visitors under other programs were rejected for this Project for that reason. These visits provide experience not only with information, but also with procedures, setting up contacts, and making arrangements. The schools learned much from this first contact with such a Project. They can be ready, in the future, to program such a visit more effectively, knowing the pitfalls beforehand.

Most of the visits were scheduled for one full day. This allowed time for the visitor to address large assemblies, meet with students and teachers individually, and in some cases meet with administrators and parents. The geographical distribution of scientists according to discipline was somewhat poor. We received, for instance, requests for geologists that we could not fill for lack of available earth scientists in the area of the schools. We did send one geologist from Lawrence University on a two-day (overnight) visit to two schools near the western border of the state.

The two-day visit was a good answer to some of these scheduling problems, and fortunately several scientists were able to spend the time necessary for this contact. On a two-day visit, the scientist spent one full day at each school, and often served as a consultant or addressed parents during the evening between the two days. Where the location of two schools both requesting the same discipline at about the same time was such that no visitor was easily available, the two-day visit seemed the only answer. In several such cases it was successful.

In order to establish a roster of available scientists, a committee consisting of **Jack Arndt** (the Dir-

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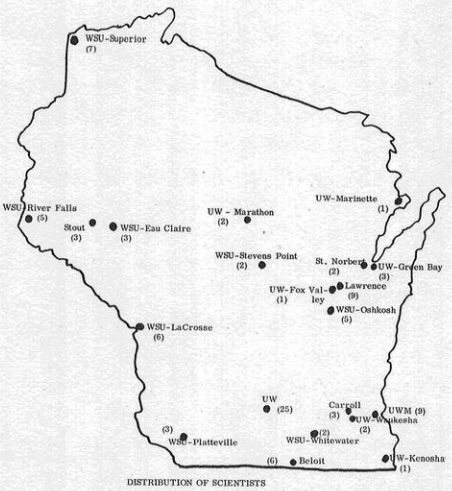

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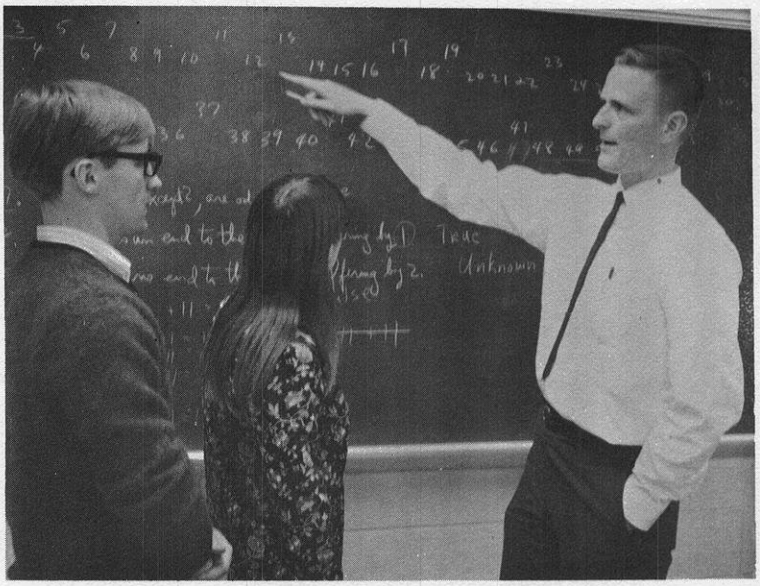


Walter Sadler, Math instructor at the UW Waukesha Co. campus, holds individual conferences with students at New Holstein High School.

ector of the Project), **Dr. Richard Netzel** (Dept. of Physics, WSU-Oshkosh), **Dr. John Finch** (Dept. of Math, Beloit College), and **Dr. Aaron Ihde** (Dept. of Chemistry, UW, Madison) was formed. Dr. Netzel provided names of possibly interested physics professors; Dr. Finch handled Mathematics; Dr. Ihde suggested chemists; and Mr. Arndt took care of contacting biology and earth science people. The process of acquiring names for the roster was a continuous one, even after the visits had begun. The majority of visitors, however, had returned data sheets by the end of December, and on the final roster were 101 scientists; 18 chemists; 25 biologists; 29 physicists; 4 engineers; 17 mathematicians; and 9 earth scientists. In addition to the names provided by members of the committee, requests for interested personnel were sent to the chairmen of the sciences departments of the State Universities and Center System campuses. Several scientists evidently heard of the Project from outside sources and requested placement on the roster.

While the scientists were classified under six general classifications (biology, chemistry, engineering, physics, mathematics, and earth sciences), their topics and interests were specialized. For example, the visitors in biology talked on subjects ranging from air pollution to desert ecology. Under the general class of physics, visitors included such topics as electronics, fluid mechanics, nuclear physics, astronomy, and magnetism. Names of specific subjects that the visitor was willing to speak on had been sent to the school, and many teachers prepared their students in this special area prior to the visit.

All types of educators were included on the roster. There were 30 full professors, 30 assistant professors, 29 associate professors, and 12 instructors. Their ages ranged from about 24 to 60. Many had had prior experience in visiting scientists programs, and almost all had some experience in dealing with high-school age students.

Geographical distribution of scientists can be seen on the map. The original plan had called for scientists to travel within a 50-mile radius of their home campuses. The geographical distribution of schools making requests, however, did not always coincide with the distribution of scientists; in reality, the average length of a trip for a scientist was 149 miles (round trip), or a radius of about 75 miles. The extra mileage was generally counteracted by the fact that there were fewer visits than originally planned for.

Comments from both schools and visitors after the visits were, without exception, favorable. Most important results were that the teachers and students got contact with someone not of their own level. Most teachers agreed that they received valuable information from their visitors in their own disciplines, and reactions from students indicated that they realized that there was so much more to a discipline than they could glean from high school texts. They began to understand that college professors and college work were available to them. Teachers, especially in rural situations, were appreciative of the contact with someone who has the opportunity to keep up with recent advances.

The best parts of the visit, according to the reports, were the interviews with the teachers and adminstrators, and the small group talks with students. Large assemblies were not as effective as one-to-three-student meetings. Most of the meetings with science and math clubs were very well received. These students, of course, are the ones who are perhaps most interested in the disciplines, as evidence by the extracurricular time already spent in these clubs. In some of the smaller and rural schools, where very few of the class plan to go on to college, the visitor nonetheless left an impact in the area of curiosity; college-bound or not, high school age students are curious and knowledge-hungry!

CONSERVATION OF HUMAN AND NATURAL RESOURCES

Excerpts from three provocative papers presented at the Annual Meeting of the Academy, April 28-30, at Oshkosh

Human Development: A Prime Natural Resource

By Belden Paulson

IT IS NOW KNOWN that after World War II our estimate of losses in Europe was very considerably off target. Our main measuring criterion had been visible losses in terms of factories and bridges destroyed, percentage of city property ruined, and the like. The yardstick was physical assets. Losses were over-estimated and a major reason for this was inadequate attention to measurements of human capital. Although we are aware of the tremendous human losses suffered, there nevertheless remained in postwar Europe a great reservoir of human skills, initiative, imagination and leadership ability among a people richly endowed. These were the foundation for the rapid reconstruction and new advances of postwar Europe.

Many people still cannot understand or believe the seeming impossible recovery of Europe in the first postwar years, even with the assistance of the Marshall Plan. This is particularly incomprehensible in view of the extremely slow economic and social progress that has been registered in the world's developing areas during the last two decades. For example, economist Robert Heilbroner has estimated that notwithstanding massive investments, per capita income in Asia, Africa and Latin America has increased only $1 per person during each year of the last decade. People are ever more puzzled to learn that many of these countries, especially the poorest, cannot even absorb large doses of additional monetary capital.

Obviously there are a number of important factors that explain the contrasting experience between postwar Europe and contemporary developing areas. Probably the key variable is the degree of development in "human capital". This concept refers to the knowledge, skills and capacities of a people in a society. The assumption is that people are a form of capital, and that capital accumulation in this sense can be the result of deliberate investment in the manner of accumulation of physical capital.

There is ample evidence that in advanced industrial societies human capital has grown at a faster rate than non-human capital. Professor Frederick Harbison, manpower specialist at Princeton, for example, has indicated that between 1900 and 1956 in the United States resources allocated to education rose three and one-half times greater than those allocated to physical capital. Investment in human capital, in other words, was considered a more attractive investment than physical assets. He estimates that the total stock of educational capital in the labor force of this country increased from $63 billion in 1900 to $535 billion in 1956.

How does human capital, or the human resource, develop? The usual means, listed by University of Chicago economist Theodore Schultz, are these:

1. Formal education—preschool, primary, secondary, higher education.
2. On-the-job training—adult education, membership in many kinds of educational groups.
3. Self development—correspondence courses, personal reading, informal learning from others.
4. Improvement in health—all efforts related to life expectancy, strength and stamina and vitality, including nutritional level.
5. Migration of individuals—adjustments to changing job opportunities.

Among experts attempting to formulate development strategies in the world's poverty areas, there is increasing emphasis on human resource development. In a mounting literature the argument now is heard that the developing areas are held back above all because the human capabilities of their people are not being developed fast enough. Money and machines and all of the technology of modern science cannot be absorbed and fully utilized because the knowledge, skill and leadership are lacking. Human limits hold back non-human capital growth.

Professor Harbison has attempted to trace a close correlation between development of "strategic or high level manpower" and economic and social development. He defines high level manpower as persons with twelve years or more of formal education or its equivalent in skill and experience. In industrially advanced countries, he estimates, high level manpower exceeds 100 persons per 1,000 population. In poverty stricken countries, in contrast, human capital is as low as one person in 1,000 population. He argues that in industrially advanced countries the accumulation of high level manpower exceeds the rate of increase of the total labor force. In both the United States and the Soviet Union, for example, high level manpower has reportedly increased more than twice as fast in the last fifty years as the country's total labor force.

Harbison estimates that the United States has some 300 persons of high level manpower per

1,000 population. In other words, there is maybe a 300-fold gap between the percentage of population in the United States with at least twelve years of formal education or its equivalent and some developing countries. It confirms the tremendous gap in economic and social development among the so-called "rich and poor countries."

STRANGELY, despite this affluence seen in world terms, the picture changes dramatically within the United States. We sometimes ignore the existence of our own "underdeveloped areas" relative to the general norm of American life. It is increasingly obvious, moreover, that even twelve years of formal education in the United States is not necessarily sufficient to compete in our labor market and to live "the good life" in an age of increasing technical specialization.

Within the United States there is a process not dissimilar to that in the rest of the world. On one hand, there is a sector of high level manpower that is rapidly improving its level of living because it has developed the knowledge and skills to make use of opportunities offered by modern technology and because it understands and has access to the possibilities inherent in the social and political system. But on the other hand, there is another sector of our society developing less slowly or not developing at all, because it is insufficiently a part of the modern economic-social-political mainstream. Statistics are hard to come by but some observers argue that this gap between "the rich and the poor" is increasing within the United States as in the world.

It takes no particular perception to realize that in the United States, or here in Wisconsin, Harbison's definition of "high level manpower"—twelve years of schooling or its equivalent—is no longer adequate. Moreover, we are ever more aware that schooling must be coupled with certain other variables, perhaps closely interrelated to schooling, if the quality of our human resources is to be realistically portrayed. For example, there is the factor of participation in the political system: the knowledge, not to mention the legal right, prerequisite for exercising some role in decision-making so policies in some degree are related to the person's needs and views. Another essential factor is access to equal opportunity—whether in jobs, education, or the holding of public office. This implies the elimination of all racial discrimination barriers.

WE IN WISCONSIN know that we have our own underdeveloped areas, whether in certain northern rural counties of the state or in central city sub-areas of our major cities. I am personally involved in efforts to develop human capital in Milwaukee's central city, a several square mile area directly north of downtown, which is one of the city's depressed sectors. The economic, social, political and educational factors common to disadvantaged central city areas are found here. Here, for instance, 32% of the housing is dilapidated or deteriorating compared to 12% in the rest of the city. Most of Milwaukee's non-white population—more than 80% —lives here.

The 1960 census indicated that 38% of Milwaukee's non-white people had incomes less than $4,000, compared to 16% of the white population. Almost 50% of the non-white population 25 years of age and older had not finished more than eight school grades. Only 26% had finished high school or had any college. In other words, half of them do not meet the educational criteria of Harbison for high level manpower, not to mention the even higher requirements of modern America.

In a questionnaire conducted among non-whites residing in the central city, 40% of the men interviewed felt that they had been denied a job primarily because of race. There is ample evidence confirming high feelings of alienation of this population toward authority structures of the larger community—whether the police, public schools, city government, or poverty agencies.

If there is to be effective confrontation with this complex of needs, we should be advised to look upon the central city population not as "a problem", but as a human resource with tremendous potential for achievement.

We need a massive coordinated attack that includes the widening of vocational and higher educational opportunity to strata still unreached, the broadening of the political system so that institutions can become more relevant to needs through participation of those with needs, and absolute elimination of remaining barriers to full racial equality.

Whatever our particular disciplinary viewpoint—whether it be business or labor, government or academic—and whether our concern focuses on the urban or rural setting, we will do well to take to heart Harbison's frame of reference. Our prime natural resource is our people. The full utilization of our state's physical resources will depend on the full development of our human resources.

A Prescription For Conservation Action

By Gordon A. Bubolz

DEDICATED conservationists of the past—men like John Muir, Aldo Leopold, Carl Schurz, and E. J. Griffiths—appreciated deeply the value of natural resources to man's environment. They realized that life's human values and needs are completely dependent upon the continued availability of our resources. They sensed what John H. Storer very effectively stated in his book *Web of Life:*

> "The question is whether man will develop understanding before he destroys himself by destroying his environment."

The inability of Mother Nature to keep pace with man's wanton destruction of natural resources must be recognized by more and more people. Why, suddenly, when

our natural resources have been so abundant, have we become aware that these resources are not inexhaustible?

We are elated that we have realized far-reaching scientific accomplishments, more in the last ten years than in the previous centuries. But these startling phenomena have created unprecedented demands upon our limited base of land, water, wildlife, landscape and recreational resources. What was once an all-too-prevalent apathy has now turned to a general public concern to restore and preserve these resources for future generations. Our efforts will have to be extraordinary, since we are faced with problems of such magnitude that every human and institutional resource must become involved and be utilized!

In charting a course for natural resources conservation, it is imperative that we cope with and recognize the impact of the increasing human habitation. Actually there are two concepts of population numbers. Tom Smothers of the Smothers Brothers tells us that all this talk about population boom is nonsense. He says he can prove it: "Here I am, one person. I had two parents. They each had two parents and so we had four people. Those four each had two parents and then we had eight people. The eight had two parents and that gave us 16. The 16 had two parents and that increased the population to 32, and so on *ad infinitum.*" Tom Smothers contends that "the population increased the further *back* you go, and what we have actually had is a population deceleration, not a population boom!"

On the other hand, Thomas Malthus, who is known for his Malthusian Theory, believed that the products of the earth increase arithmetically. Each acre will produce a certain number of bushels of grain, corn, fiber, or food products. "But", said Malthus, "population increases geometrically".

Recently, geophysicists have given a great deal of credence to Malthus' theory that if you start with 12 people and increase at the rate of two percent a year, in 976 years you will have three billion people, approximately the same number of people we have now. A continuance of the two percent rate of world population growth from the present population of about three billion would provide enough people in lock-step to reach from the earth to the sun in 237 years; and were the three billion to continue increasing at the rate of two percent per year, there would be the equivalent of an allotment of one square foot per person in the globe, including mountains, deserts and arctic wastes, in about six and one-half centuries.

We are faced with conditions which make it imperative that we re-examine foundations and structures and institutional methods to find out what led us into the present situation. While general principles and criteria are helpful in giving directional guidelines for natural resources preservation and accomplishments, it has been my experience, including a few bruises, that each problem situation must be treated individually. Observing a few general rules will always stand one in good stead, but in addition to this each case must be treated individually and must be separately diagnosed in working out action-implementation prescriptions in order that the desired objectives and goals can be transformed into a reality.

(1) IS THE CAUSE A WORTHY ONE? If this can be answered in the affirmative, namely that broad human interests will be served which reflect the will and needs of the people, we will then be able to devote ourselves completely, wholeheartedly and without reservation to transforming the project into a reality. We know of course that natural resources conservation is one of the worthiest of causes to which we could devote our energies.

(2) ORGANIZATION—We may as well recognize at the outset that when we deal with natural resources conservation, it is imperative that we get a consensus of agreement from the broad range of diversified interests and groups, who in one way or another will be directly or indirectly affected. From my observation, when the "voids of liaison" between federal, state and local units of government are brought into focus and corrected, we will have scored a major initial victory for natural resources accomplishment.

Foresight on the part of our Wisconsin legislators provided statutory authorization under Section 66.945 for the creation of regional planning commissions. Through these not only are the federal and state agencies able to implement their programs more effectively, but also the basis is provided for the development of the necessary local, county and regional "catalytic cohesion".

The fact that counties situated in an area having common resources, common problems and common opportunities have this new dynamic vehicle for intercounty and regional natural resources planning and development and are enthusiastically using it is one of the bright new vistas on the conservation horizon. Congress recently has given a directive that major problems, such as highways, water pollution, recreation, air transportation, wildlife habitat management will be more satisfactorily dealt with on a regional and area basis.

(3) PEOPLE INVOLVEMENT—To succeed, a natural resources conservation and development program cannot be just another arm of the government. It must be an instrument for participation and expression of the people's needs, their wills and their human aspirations. Since there are no two people alike in a world of three and one-fourth billion people, representing many thousands of economic, social, cultural, political and problematical questions, getting the confidence and unified support of the people of the planning area is a challenging problem which must be given top priority consideration.

Numerous approaches have been used by agencies of government and project enthusiasts to develop new dimensions of public support. The one which has impressed me as being particularly effective is the statement of policy being used by the Soil Conserva-

tion Service, namely that the soil and water conservation programs of the Soil Conservation Service are not federal programs with local support but are local programs with federal assistance.

A basic human trait we must always recognize is that people are generally opposed to that which they do not understand. The best way to develop their understanding of the program is to generate their active discussion and participation in all phases of the planning process, including planning implementation. The functional medium through which a broad diversified citizen interest is generated in the now Northeastern Wisconsin Regional Planning Commission is achieved through the use of 10 advisory committees with over 300 people from all walks of life having a demonstrated interest in natural resources conservation.

(4) THE CASE METHOD, namely, handling every problem individually on its merits, including its diverse community, county and regional factors, is a principal key to natural resources conservation accomplishment. The case method has great potential for alleviating the heavy new pressures to which our natural resources are subjected.

Nature has decreed that some counties have greater water, recreational and natural resource assets than other counties. The kind of terrain, topography, geology, the type of economy and the kinds of communities, the social, cultural interests and institutions all bear quite materially on the profile and design for accomplishment. I will relate just one case history here to illustrate the point—the emergence of Wolf River regional planning.

Looking with chagrin and dismay at what was happening to the famous Wolf River water network system, noted for its thousand lakes, hundreds of spring-fed trout streams, its fish and wildlife resources, local conservationists and sportsmen expressing grave concern over the accelerated deterioration of the region's streams, lakes and wetlands sought earnestly for a new approach to reverse the tide. Fortunately, the Regional Planning statute was on the books. How to activate was their concern. A nonprofit corporation, the Wolf River Improvement Association, Inc., was organized and through it the legislature was requested to authorize an Interim Study and to make the Wolf River Region a pilot project for knowledgability on river basin problems and what to do about them. The Legislature consented. Hearings were held in the region, local citizens were given an opportunity to serve on the interim committee, along with legislators. This provided the finest kind of citizen-legislative team effort.

We now had the first step of an effective regional forum through which the citizenry could make recommendations. County Boards were asked to adopt resolutions requesting the governor to hold a public hearing and to create a regional planning commission. To this request they gave overwhelming support. In compliance with the statute, the Governor created the Commission, selected two commissioners from each county, the county board naming the third commissioner to serve as planning policymakers and to hire a planning staff to formulate a regional comprehensive plan.

We faced many acute problems during the first few years. Regional Planning was new not only to the counties, but the state as well. "What is this", said one of the counties, "a super government, trying to tell us what to do?" The answer was "No, this is your planning commission to assist you in keeping step with progress".

During the first three-year period required to develop a comprehensive plan, we made it a practice to help counties with local problems although this was not specifically required until the comprehensive plan was completed. This helped materially to demonstrate the merits and benefits to be derived from Regional Planning, and the assistance we gave counties and communities in the region on their planning problems and projects helped lay the foundation for regional cooperation. The county boards have shown the finest kind of cooperation as did the many local conservation clubs and civic organization.

I am happy to report that while there was considerable skepticism during the first three years of regional planning among member counties, their support and strong reliance on the Commission for guidance on land, water, recreation, pollution and wildlife habitat and natural resources development is the kind of acceleration we need to alleviate the concentrated pressures and demands upon our precious natural resource heritage.

ONE SHOULD always expect to work three times as hard in furthering natural resource conservation than is normally required in achieving progress in a private business venture, or in a single unit of government. This is necessary because of the many public and private organizations and the numerous diversified interests to be served.

And more than one worthwhile conservation project has failed because of an over-concern as to who is to get the credit. A management consultant very aptly stated that there are 57 rules for achieving success. The first rule is to get the job done and to forget who gets the credit. And when that is accomplished, the other 56 rules don't matter.

Every natural resource conservation project we undertake will, when completed, help us preserve the quality of our outdoor environment, the kind of environment that enables man to live in harmony with God, nature and his fellow men.

The Search For Security

By David J. Behling

WHAT is security? Perhaps the greatest insight into security is in the Latin definition of the word

itself, from "securus," meaning "without care." Viewed positively, we think of security as a good and productive force—as peace of mind, freedom from anxiety, freedom from uncertainty, freedom from fear. With a sense of security, we are able to concentrate on the productive aspects of life and living. Viewed negatively, insecurity is thought of as a bad and unproductive force characterized by doubt, apprehension, worry, fear, anxiety and other destructive and debilitating feelings.

All people want security. But as society has advanced the nature of man's search for it has changed. Primitive man's chief concern was the elemental protection of his life from hunger, weather, beasts and his other enemies. Advancing civilization brought a lessening of some sources of insecurity, but an increase in others, including pestilence, famine, and despotic rulers. With the industrial revolution, further progress was made.

It's a fact, perhaps not too well known, that any great degree of economic security, or any great development of the insurance business that does so much to provide economic security, is well nigh impossible except at times and in places characterized by a considerable economic and industrial development, a general respect for law and order, a basically sound currency, and reasonable stability of government. Favorable concurrences of these conditions have obviously not existed for too long, and the Roman historian Livy may not have been thinking of insurance when he wrote some 2,000 years ago: "Nothing stings more deeply than the loss of money—and security."

On the other hand, maybe Livy did have insurance in mind when he expressed in those words man's need for economic security, for he may have known that almost 2,000 years before his time the Code of Hammurabi had indicated that the essentials of insurance were known to Babylonian traders. Hammurabi had also provided that if a man were robbed and the criminal not apprehended, the government would "render back to him whatsoever of his that was lost"—a sort of very early social security act.

Also, Livy may have known that some 900 years before his time the merchants of Rhodes had added important refinements to marine insurance when they devised the Rhodian Sea Law. Storms and pirates were taking their toll of trading vessels, not to mention imagined losses to ship-gulping sea monsters or to sailing off the edge of the world into the surrounding void. The Rhodians designed a system whereby when a ship failed to return, each merchant absorbed a portion of the loss rather than allowing the unlucky individual owner to be ruined.

This early insurance, however much economic security it created in the specific situations it covered, did not perceptably increase the security of the great majority of people then living. Yet we owe a great debt to the merchant chiefs of the Mediterranean, for they formalized the voluntary mutual assistance and risk-sharing principles on which all insurance is based.

The Greeks, whose reverence for human life exceeded that of any people who preceeded them, were the first to apply these principles to men's lives. Their burial societies not only met the burial expenses of deceased members, but also provided for at least some of the temporary financial needs of their widows and orphans.

The business-like Romans left evidences that they had developed rather complex forms of commercial insurance, and also gave continuity to the concept of life insurance through their payments to the survivors of soldiers. As a matter of fact, some 2,000 years ago the Roman, Ulpianus, for that purpose provided a table of life expectancy so accurate that only slight changes have ever been made since then.

Although the Greeks and Romans did make great strides forward in the discovery of insurance principles and in the wider application of these principles to more people, they brought increased security to no more than a very small fraction of the population.

The snail's pace development of man's cooperative efforts at achieving economic security halted altogether with the fall of Rome to the Barbarians and the advent of the Dark Ages. The feudalism of those days has been characterized as a compulsory form of security: In return for his loyalty and labor for his ruler a man hoped to obtain protection and the necessities of life for himself and his family. This was not an ennobling form of security—and it existed only at the whim of the lord of the manor and only so long as the latter remained as strong or stronger than his rivals. This rather insecure form of security may still compare favorably with the situation of a significant proportion of contemporary mankind living in countries not yet characterized by any considerable economic and industrial development, respect for law and order, soundness of currency, or stability of government.

THE GREAT fire of London in 1666, while destroying five-sixths of the city, had two beneficial side effects upon man's security. It destroyed that section where the plague that periodically swept the city was concentrated and this has been credited with controlling the future outbreaks of the disease, and fire insurance sprung into being from the city's embers, enabling men to protect their homes from the financial consequences of the disaster of fire. This is another example of the fact that out of mankind's greatest disasters have often arisen humanity's means of salvation.

It was then, too, that life insurance policies and annuities entered the scene, in most cases being offered to the public by companies that underwrote both fire and life risks. So pertinacious were the agents who solicited for these companies that an outraged poet of the day complained:

By fire and life insurers next
I'm intercepted, Pestered, vexed,
Almost beyond endurance;
And though the schemes appear
unsound,
Their advocates are seldom found
Deficient in assurance.

Among the numerous companies were the following whose titles seem even to our speculative generation of the 1960's sufficiently absurd: Assurance of Female Chastity; Assurance from Lying; Insurance From Death By Drinking Gin; Insurance Against Going To Hell.

But out of this great debacle came the clearing of the way for legitimate life insurance underwriting.

Often, in those early days, fire and particularly life policies were woefully either underpriced or overpriced by reason of misconceptions as to the principles involved. Efforts to clear up these misconceptions led to the emergence of actuarial science, dealing with the mathematics of life contingencies, that is, the probabilities of life. As a matter of fact, it is still surprisingly mysterious, despite the fact that all the really basic principles of actuarial science had been developed and presented in text books by the time that I studied a Mathematics of Life Insurance course at the university exactly forty years ago.

I PROMPTLY became convinced that the life insurance problems of the future could be solved by the experience and wisdom of the past. These have supplied the basic and immutable principles; but the actual developments and innovations in my lifetime were to be so extraordinary that no one would then have conceived them to be possible of accomplishment in a short forty years.

No one 40 years ago would have guessed to what extent new policies could be developed to provide new packages of life insurance and annuity benefits, "new" even if the elements of each package were as old as actuarial science, and no one would have foreseen the development of new uses for life insurance in the business world, such as to protect businesses in the event of death of key executives, or to provide necessary additional security for loans, or to assure orderly continuance of partnership businesses after the death of one partner, or that Uncle Sam will get his estate tax with a sufficient amount left for the deceased's family. Or the great changes in the methods by which life insurance is presented to the purchaser, enabling him to analyze his financial situation and buy the particular policies that fit into a logical program of protection for the particular insurance needs of his own family. Now, in many cases, trusted confidential advisors of quasi-professional or professional designation—that of Chartered Life Underwriter, which is the equivalent of the CPA in the accounting profession.

The life insurance business is usually counted among the very "conservative" institutions in our economic and social life. But an obsession with security through the maintenance of the status quo is the enemy of long-term growth and even of existence. It must be replaced by an intense desire to respond to the new situations arising in our ever-changing world. For example, during the early days of life insurance in this country policies became null and void if the insured traveled too far from home, into the then unhealthy or dangerous regions of the southern and western states, or into less settled parts of the world or if he engaged in a duel, or even if he left the earth in a hot air balloon! In the days when horses and wagons were the usual means of land transportation, railroad engineers, firemen, and conductors had to pay extra for life insurance protection, and anybody with nerve enough to serve as brakeman on a freight train just couldn't get insurance at any price.

In contrast, one week before Major Gordon Cooper blasted off on his 22-orbit space flight in 1963 the Aetna Life Insurance Company issued $100,000 life insurance policies to Cooper and to each of the six other original Astronauts. Their life insurance protection for their families was good anywhere on earth or in outerspace. Yes, even on the moon, if and when some of those men do get there.

DOES THIS economic security mean protection against change in man's economic condition, to enable him to maintain the status quo? Not by any means: We must not forget the paradox that an obsession with security through the maintenance of the status quo is the enemy not only of all progress, but also ultimately of security itself.

Insurance provides a bulwark against hazards to economic security, bulwarks it would be unthinkable to be without; for economic misfortune rarely, if ever, affects only the few persons whom it directly strikes. If there is no method of relieving the financial consequences of individual catastrophe, society as a whole suffers both from the nonpayment of the liabilities of the insolvent and from the interruption of the productive activities of all concerned. And the other side of the coin is that in the absence of the security that insurance can promise, man would not dare to invest either his money or his efforts in the business and personal activities and operations which make the modern world what it is and lead to the great developments which the passing decades observe.

Finally, what about the long-term security of the insurance business itself? This will come from its adaptability to change: From the new protections it provides against the financial consequences of the new hazards and perils which our country's developing economic and personal life incur.

For all business—in fact for man himself—there can be no security that is not grounded on courageous and wise adaptation to the new situations that our ever-changing world will bring. Man's search for security will continue to be a major personal and governmental preoccupation, but its pursuit ought not obscure all other values, and especially those on which security itself depends.

The words of Somerset Maugham as he watched the fall of France in the first year of World War II are arresting—

> "Those who value security above freedom will lose their freedom, and having lost their freedom, they will lose their security also."

Photo by Robert Ducklow

Left to right, James G. Frechette, Member of the Board of Directors, Menominee Enterprises, Inc., Gordon A. Bubolz and John Munson, President, Menominee Trails, Inc.

MENOMINEE TOURS

Tours of the magnificent forest of the Menominees will be conducted by native Indian guides every weekend during the summer and fall season. The tours will be Saturdays at 10:00 a.m. and 1:30 p.m. and Sundays at 1:30, or as otherwise arranged with the Menominee Trails Corp., which has headquarters at the Menominee Information Office at Keshena. Menominee Trails Corp. can be reached by mail or telephone.

The charge for the tours will be $1.00 for children under 12 years of age; $1.50 for students and $3.00 for adults. Ten or more persons will be necessary for a guided tour.

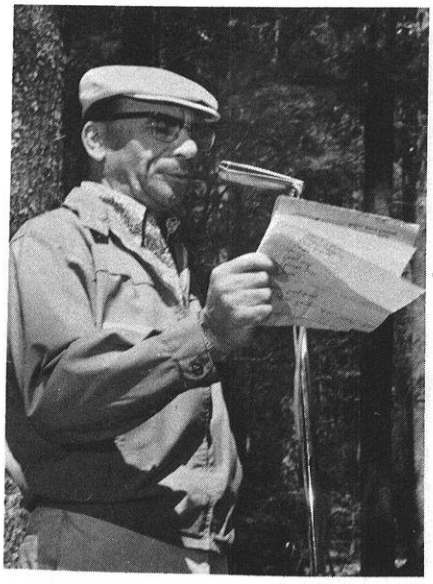


Photo by Robert Ducklow

Prof. Jake Shapiro

A 16-weeks nature interpretation seminar was recently completed in which 55 Menominees participated. This unique seminar was under the leadership of Dr. Jacob Shapiro (Wis. State University, Oshkosh—A57) and Gordon Bubolz (Pres., Home Mutual Insurance Co., Appleton—L64), with the cooperation of 16 University professors. A broad range of subjects was covered, including archaeology, anthropology, geology, Indian history, legends and lore, and including many interesting species of vegetation, flowers, mosses and wildlife indigenous to the area.

Teaching of the course demonstrated that Menominees have a deep interest and understanding of the things of nature and their preservation, and they showed a keen desire to keep nature in its natural state.

Menominees who attended 15 out of 17 class periods received Certificates of Meritorius Accomplishment which will enable them to serve as official guides for several types of nature trail tours.

The Menominee Nature Tours feature white waters cascading through the scenic dells of the famous Wolf River; the breath-taking rapids and eddies of Smokey Falls; Spirit Rock and its famous legend of tribal immortality; towering virgin white pines, one of the few such stands remaining in the United States; ancient Indian burial grounds, where the Menominees used to build little houses over the graves, offering food and delicacies to the departed spirits through a tiny window; a mass of impressive rock out-croppings, vestigial geology of the glacial period; teetering rock and its breath-taking equilibrium; the story of the first sustained yield forestry program in the United States; many wild flowers, mosses, lichens, mushrooms and other plant life in their unblemished setting; a natural bird sanctuary, deer and little forest animals in wildland habitat; Indian lore and history of an illustrious people; a variety of scenic trails; and pure, clean air scented by the pines and cedars, all explained by well-informed guides, the Menominees themselves.—Mrs. Betty Ducklow, Appleton.

ACADEMY NEWS

Wisconsin Academy Annual Meeting

The 97th anniversary meeting of the Wisconsin Academy was held jointly with the Wisconsin Junior Academy of Science on April 28-30, at Wisconsin State University-Oshkosh.

On Friday afternoon there was a visit to the Victrylite Candle Co., and "Candle Cabin". The evening program was highlighted with the keynote address on "Wisconsin's Natural Resources" by Senator Gaylord Nelson. A reception for the Senator was held following the evening program, at which he was presented with the Academy's Distinguished Service Citation.

On Saturday, an interested Junior Academy audience listened to a series of reports by young people who had conducted individual scientific research.

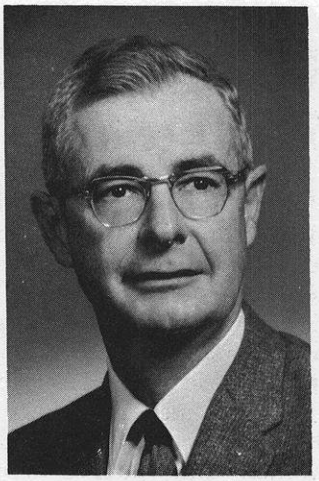
The Senior Academy participated in a symposium on natural resources, with sectional programs conducted in the afternoon.

The annual banquet Saturday night featured the presentation of Junior Academy awards, Academy citations and Honorary Life Memberships, the presidential address, and a revue by the Wisconsin Idea Theater.

The annual meeting concluded Sunday morning with visits to the Paine Art Center and Oshkosh Public Museum.

Portions of three talks, and other news of interest appear elsewhere in this issue of the **Review.**

New Officers Elected for 1967-68



PRESIDENT
JOHN W. THOMSON

Dr. Thomson is Professor of Botany at the University of Wisconsin in Madison. He did his work at Columbia and Wisconsin, and spent the next few years at the American Museum of Natural History in New York, Brooklyn College, and Superior State College, before returning to UW in 1944 as Asst. Prof. in Botany.

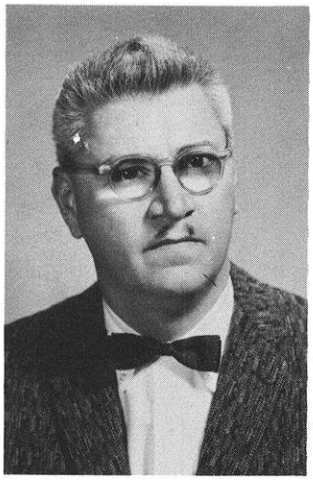
Interest in lichens has dominated his research program, and concentrating on arctic lichens he has traveled extensively in the far north, considerably enlarged the herbarium of the University, and published many technical and popular papers.

Dr. Thomson has long been active in the Wisconsin Academy. In 1944 he founded the Junior Academy and was active in this until 1960. In 1960 he was elected a Life Member in recognition of this outstanding work.

PRESIDENT-ELECT
ADOLPH A. SUPPAN

Dr. Suppan is Dean of the School of Fine Arts at the University of Wisconsin-Milwaukee. He received his academic training at Milwaukee State College, University of Chicago and University of Wisconsin. He has taught at the UW-M and its predecessor, Milwaukee State College, since 1940.

Professor Suppan serves on the Board of Directors of the Milwaukee Repertory Theatre, Wisconsin Arts Foundation and Council, Metropolitan Arts Council, and Milwaukee Symphony Orchestra. He is a member of the American Association of University Professors, Wisconsin World Affairs Council, Goethe House of Milwaukee, and the Governor's Council on the Arts. The results of his research and his ideas about the role of the arts in society have been widely published.

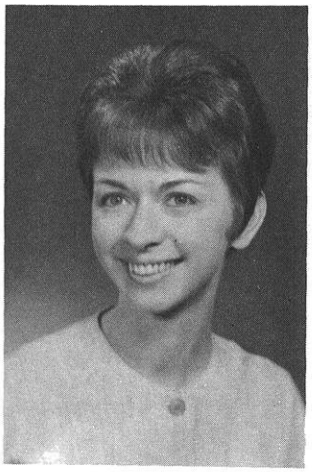


VICE-PRESIDENT, SCIENCES
REZNEAT M. DARNELL

Dr. Darnell is Professor in Biology at Marquette University. He obtained his education at Southwestern College, Memphis, Tenn., Rice University and University of Minnesota. After three years teaching at Tulane, he came to Marquette in 1955 as Assistant Professor.

As an aquatic ecologist he has been interested in the nutrition of aquatic animals, and studies have led to an examination of problems of biological decomposition in Mexico, Louisiana, North Carolina and Wisconsin.

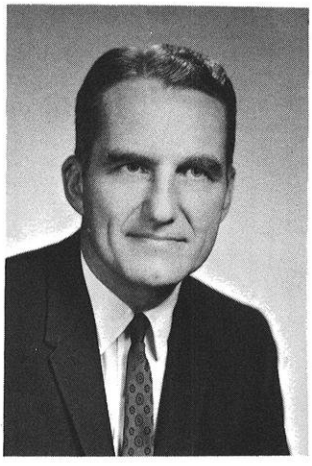
Dr. Darnell is active in many scientific societies and has participated in conferences and symposia on systematic biology, aquatic ecology, and education. Since 1964 he has been Chairman of the Wisconsin State Board for the Preservation of Scientific Areas.



VICE-PRESIDENT, ARTS
MARY ELLEN PAGEL

Mrs. Pagel is instructor in the Department of Art, UW Center System (Racine, Kenosha, Waukesha), and is currently working on her PhD in Art History at UW-Madison.

A native of Galesburg, Illinois, she studied at University of Illinois. She has exhibited paintings and drawings in local and regional shows and won awards at two Wisconsin State Fair exhibitions, has published articles on Wisconsin architecture, and has co-authored two volumes of the Guides to Historic Milwaukee series. Mrs. Pagel has presented numerous extension programs and lectures including "Edouard Manet" and "20th Century Furniture" in 1967, and is currently serving as interior design coordinator for the new UW Center in Waukesha.



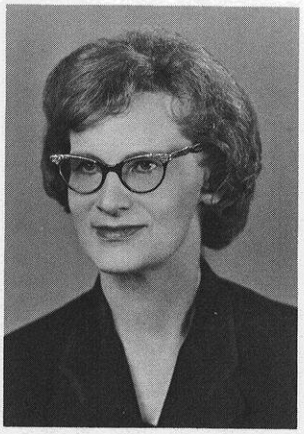
VICE-PRESIDENT, LETTERS
MILLER UPTON

Dr. Upton has been President of Beloit College since 1954, with an administration marked with far-reaching curricular changes, culminating in the Beloit Plan of year-round education.

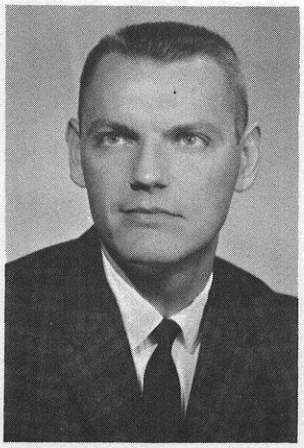
He studied at Tulane, Harvard and Northwestern, and has been awarded honorary degrees by Lawrence University and Monmouth College. He has taught at Lake Forest College, Northwestern and Washington University in St. Louis where he served as Dean of the School of Business and Public Administration.

Dr. Upton is co-author of a book on business finance and the author of many articles in professional journals. In 1963, the Beloit Association of Commerce named him the community's "Man of the Year".

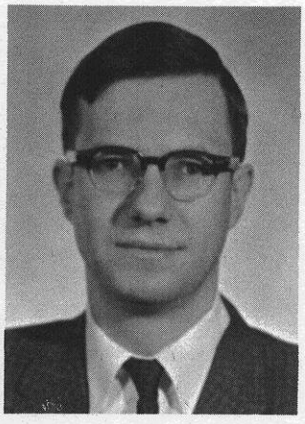
Continuing Officers



SECRETARY — EUNICE R. BONOW
Chairman of Pharmacy Dept., UWM.



TREASURER—JACK R. ARNDT
Specialist, School of Pharmacy and University Extension, UW-Madison. (Jack has served the Academy for several years, and now has been elected to the all-important post of Treasurer.)



LIBRARIAN — JACK A. CLARKE
Associate Professor of Library Science, UW-Madison.

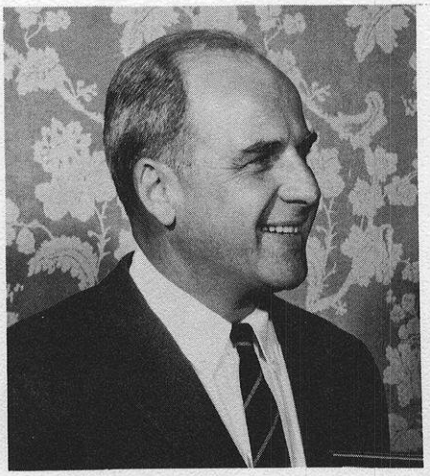
Distinguished Service Citations

Two prominent Wisconsinites were honored at the banquet with distinguished service citations:

DR. FARRINGTON DANIELS (L 21)

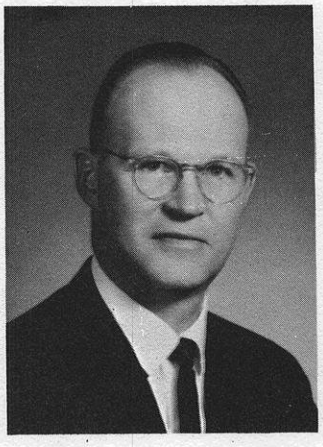
Source of radiant energy, not only to the University of Wisconsin for four decades both as brilliant teacher and experimental physical chemist and as curriculum innovator in courses charting the impact of science on contemporary life, but also as respected editor and lecturer in wider scientific fields, influential administrator in the Manhattan Project and Argonne National Labratory, and honored leader in many professional societies, fundamentally burning with dedication to the welfare of mankind, as his concentration on problems of nitrogen fixation and solar energy attests.

SENATOR GAYLORD NELSON



For his outstanding leadership in conservation of natural resources in Wisconsin and the nation. His timely efforts conceived the Outdoor Recreation Act Program when our state needed revenues for land acquisition, restoration, and management. His work for preservation of wild rivers, lake-shore zoning, creation of regional planning commissions, and controls of pesticides and other environmental pollution represents pioneering statesmanship toward retaining quality in our environment. He personifies the Leopoldian "Ecological Conscience" reminding citizens of their duty to manage wisely all things held in public trust.

EDITOR, TRANSACTIONS—
WALTER F. PETERSON
Professor of History, Lawrence University.



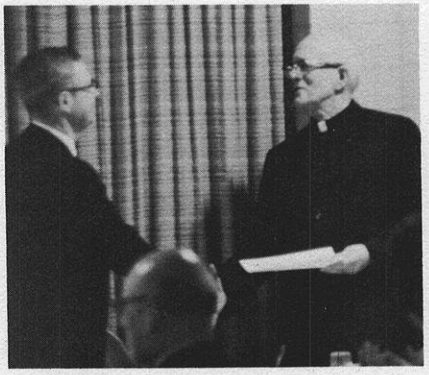
EDITOR, REVIEW—
RUTH L. HINE
Research and Planning Division, Wisconsin Conservation Dept.

Honorary Life Memberships Awarded

Two Academy members who had completed 40 years of membership were recognized at the annual banquet with Honorary Life Memberships:

STILLMAN WRIGHT (A 27), Chief, Office of Foreign Activities of the Fish and Wildlife Service, Washington, D.C.; and

REV. ANSELM M. KEEFE (A 27), Prof. of Botany and Chairman of the Biology Dept. of St. Norbert College



Council Meeting Minutes April 27, 1967

Present: Jack R. Arndt, Joseph G. Baier, George Becker, David J. Behling, Eunice Bonow, Ralph N. Buckstaff, Stephen F. Darling, Robert J. Dicke, Charles D. Goff, Ruth L. Hine, Henry A. Meyer, Katherine G. Nelson, Norman C. Olson, Jacob Shapiro, Walter E. Scott, John W. Thomson and Carl Welty.

1. The meeting was called to order at 5:15 p.m. in room 220 of the Reeve Union on the campus of the Wisconsin State University-Oshkosh, President Behling presiding.

2. The minutes of the Council Meeting on February 11, 1967 were approved as printed in the **Wisconsin Academy Review,** vol. 14, no. 1, p. 18 (Spring 1967).

3. Mr. Olson, the **Treasurer,** reported that the books of the Wisconsin Academy for the fiscal year

A Message From Academy President John W. Thomson

This year at the Academy annual meeting it was good to meet so many old friends and familiar faces. And yet to keep up with the increasing number of creative people we should be meeting many *new* friends and *unfamiliar* faces!

Also at our meetings there is a surprisingly small number of papers volunteered for presentation in arts and letters. Efforts to encourage representation must be reinforced to obtain a better balance of interests in the Academy. It appears that a critical and complete study of the activities and possible future development of the Academy must be made at this time.

The Academy has long been intimately associated with the study and development of the environmental resources of the state. Among the contributors of the papers which have appeared in the *Transactions* are many distinguished authors, and their studies have given a solid base upon which to build further researches. Many have contained recommendations which have been used in the proper development of the natural resources of Wisconsin. The exceedingly active work carried on by the Wild Rivers Committee is further sample of the contributions being made. Ways must be sought to enlarge upon these service activities of the Academy.

The human resources of Wisconsin are of prime importance. The coming meetings in Eau Claire next spring have educational resources as their central theme. The Academy of course has long had a strong interest in the development of youth in the state through its fostering of the Junior Academy.

The Academy has also functioned as the initiator of support for groups and interests which developed under its aegis and then split off into separate societies, e.g. such fields of interest as history, ornithology, archaeology, phenology. The surge of interest in things botanical suggest that the time is ripe for the Academy to make an effort to support the formation of a botanical section. To this end a committee is being appointed.

These are some of the things that are in the minds of your officers. Are there other ways in which you feel that the Academy can play a larger, more important role in the life of Wisconsin? Write us and let us know your ideas and suggestions.

1966-67 were closed for auditing purposes on Friday, April 14, 1967. Our cash position has remained about level during the past year. The balance of $13,152.01 should be viewed in context with the fact that some $2200.00 of this amount belongs to the Wild Rivers project. In addition, the $3000.00 in bonds is shown at maturity value. If they were sold at this time, they would bring $2,562.50. I recommend their retention since, as they approach maturity, their market value will improve. We have maintained economic equilibrium, but only with the very substantial financial help of Dr. Steenbock. It appears that continued assistance from donors will be required, even with the contemplated increase in dues for 1968.

4. Mr. Behling reported that he represented the Academy at the **Regional Education Laboratories Conference** in Madison.

5. The Council approved that the **1968 annual meeting** be held April 26, 27, 28 at the Wisconsin State University-Eau Claire. Mr. A. Bakken (Biology Dept. W.S.U.) will be the chairman.

6. The **1967 Fall meeting** will be held in Door County, Mr. H.C. Wilson of Ephraim as chairman.

7. A letter from Mrs. Judith Wojta, the Academy representative on the Wisconsin Arts Resources Study committee, reviewing the activities of the committee was read. She recommended that the Academy support Senate Bill 30 establishing a state **Arts Council.**

8. In the absence of Mr. Peterson, Editor of the **Transactions,** his report was read. The Transactions are at the printer and will be distributed in a few weeks.

9. The report of the **Auditing Committee** was read. The committee recommended that the Academy adhere to recognized financial principles, that persons dealing with cash and those having financial responsibility in general be bonded by a recognized surety. The Council unanimously approved the motion that all persons responsible in their offices for handling money

for the Academy be bonded by a recognized surety.

10. Mr. Goff, Chairman of the Local Arrangements Committee commented on the program.

11. Mr. Scott, in the absence of Mr. Clark, the chairman of the **Nominating Committee,** read the list of nominations for the 1967-68 officers to be elected on April 28 at the Annual Business Meeting. The Council unanimously approved the slate.

12. Mr. Becker, chairman of the **Wild Rivers Cooperative Project** distributed copies of the "Wild River News"—March 15, 1967 issue.

13. Miss Hine, Editor of the **Review,** announced that four issues would be published because of mailing regulations. She distributed copies of the Spring 1967 issue.

14. Mr. Arndt reviewed the activities of the **Junior Academy.**

15. Mr. Scott reported that $2938 had been pledged to the **Centennial Fund.** The committee is working to reach the goal of $4500 to match the gift of Dr. Harry Steenbock.

The meeting adjourned at 6:25 p.m.

Eunice R. Bonow
Secretary

Annual Meeting Minutes
April 28, 1967

The meeting was convened at 5:00 p.m. in Room 102 of the Clow Social Science Center on the campus of the Wisconsin State University-Oshkosh, President Behling presiding. Fifty members of the Academy were present.

1. The **minutes** of the Ninety-Sixth Annual Business Meeting on May 7, 1966 were approved as distributed.

2. The **Treasurer's report** was distributed, briefly discussed, and approved.

3. President Behling announced that Miss Ruth Hine was appointed the Editor of the **Wisconsin Academy Review.**

4. The **1967 Fall Gathering** will be held in Door County, the dates to be determined by the Committee, Harold C. Wilson (Ephraim) as chairman.

5. The action taken at the February 11, 1967 meeting of the Academy Council, reported in a letter dated February 19, 1967 sent to all members and in the minutes of the Council Meeting (**Academy Review,** Spring 1967) relative to an **increase in dues** was presented. This action is necessitated by the increase in publication costs and the broadening of the Academy activities to include a fall meeting. A motion that the dues of the individual active member be increased to $7.50 beginning January 1, 1968 and that family memberships be discontinued as private memberships will include all members of the dues payers family was unanimously approved.

6. Mr. Scott reported that $2013 has been contributed and $925 pledged to the **Centennial Fund.** The goal is $4500. to match the gift from Dr. Harry Steenbock. The names of the contributors are published in the **Academy Review,** Spring 1967.

7. In the absence of Mr. Clark, Mr. Scott, read the report of the **Nominating Committee.** The following slate of officers for the Academy for the year 1967-68 was presented:

President-elect
Adolph A. Suppan
Vice-President (Sciences)
R. M. Darnell
Vice-President (Arts)
Mary Ellen Pagel
Vice-President (Letters)
Miller Upton
Secretary
Eunice R. Bonow
Treasurer
Jack R. Arndt
Librarian
Jack A. Clarke

There being no other nominations, this slate of officers was elected unanimously.

8. The report of **Resolutions Committee** was read. The Committee respectfully submits the following **Resolutions** for adoption and incorporation into the official **Minutes** of the Ninety-Seventh Annual Business Meeting of the Academy at Wisconsin State University-Oshkosh on April 28-30, 1967.

I.

WHEREAS: The Wisconsin Academy of Sciences, Arts and Letters has successfully conducted its Ninety-Seventh Anniversary Meeting at Wisconsin State University-Oshkosh;

BE IT RESOLVED: That the Secretary shall express the gratitude of the membership of the Academy to the President and Faculty of Wisconsin State University-Oshkosh for their helpful provision of facilities and assistance in planning and executing the Ninety-Seventh Anniversary Meeting.

II.

WHEREAS: The Ninety-Seventh Anniversary Meeting of the Academy represents the culmination of another year of stimulation and encouragement of scholarly endeavor and service to the citizens of the State of Wisconsin through the efforts of the officers and the committees of the Academy;

BE IT RESOLVED: That the membership of the Academy express its appreciation to the officers and committees, especially to the President, **David J. Behling;** to the retiring Treasurer, **Norman C. Olson;** to the Chairman of the Program Committee, **John W. Thomson;** to the Chairman of the Local Arrangements Committee, **Charles D. Goff;** to the Chairman of the 1966 Fall Gathering Committee, **Adolph A. Suppan;** and to the Chairman of the Wild Rivers Cooperative Research Project, **George C. Becker.**

III.

WHEREAS: **Harry Steenbock** has generously contributed to financially aid the Academy in its work of serving the people of the State of Wisconsin by encouraging investigation and the dissemination of knowledge in the sciences and humanities; and

WHEREAS: The **Wisconsin Society for Ornithology** has given financial aid to support a study of the bird life in connection with the Wild Rivers Cooperative Research Project:

BE IT RESOLVED: That the membership of the Academy recognizes these contributions and thanks the respective donors.

IV.

WHEREAS: Several members of the Academy have passed away since our last Annual Meeting,

BE IT RESOLVED: That the membership of the Academy commemorate the example of participation and support of the following individuals to the aims and goals of the Academy:

William G. Marquette (1882-1963)
C. L. Harrington (1891-1966)
Raymond J. Roark (1890-1966)
Harry M. Kay (1882-1966)
Manfred Olson (1903-1967)
Stanley L. Polachek (1895-1966)
Ernest L. Chambers (1897-1966)
Lindsay Hoben (1902-1967)
Edward G. Locke (1904-1966)
Floyd McBurney, Jr. (1938-1967)
H. C. Greene (-1967)

9. President Behling commented that a business man has few opportunities to work with people in academic fields and he has gained much from it. He then thanked the officers and members of the Academy for their help and support and installed Mr. Thomson as the new President of the Academy.

The meeting adjourned at 5:25 p.m.

Eunice R. Bonow
Secretary

Wisconsin Junior Academy of Science

The 1967 season of Junior Academy activity proved to be as successful, from statistics standpoint, as any previous year. The total number of student participants was 211—exactly the number that participated in 1966. Considering the fact that there were a total of 12 meetings, compared with 14 meetings in 1966, it appears that interest in extra-class science activity is increasing.

In general, the caliber of investigations being presented by the students is on the upgrade. Adult spectators at Junior Academy meetings continue to be amazed at the scientific research work high school and junior high school students can do. The Senior Academy can be justly proud of its part in founding and sponsoring the Junior Academy.

The NSG-supported Wisconsin Visiting Scientists Project terminated on May 30, 1967, and was considered successful in creating a link between high school age students and research people. A complete report of the Project is given elsewhere in this issue.

This year will mark the first time in five years that Wisconsin will not be represented at the National Youth Science Camp at Camp Pocahontas, West Virginia. Late receipt of application materials by the State Office of the Junior Academy caused the materials to be distributed to the schools at a late date. As a result, no completed application forms were received for consideration.

Plans are already being formulated for the 1968 district and regional meetings. We are looking forward to another successful year and urge all members of the Senior Academy to support our activities in any way they can.—Jack R. Arndt

Wild Rivers Cooperative Project

A recent publication of the U.S. Forest Service entitled "The Nicolet National Forest—1966" in its section dealing with water says: "The Pine and Popple Rivers have been designated by the Wisconsin Legislature as part of the State's "Wild River" system. Members of Wisconsin Academy of Sciences, Arts, and Letters have been making studies on the waters and streamsides. The aesthetics of these waters, and portions of their watersheds, have been improved by multiple use management. A "Wild River" plan will be developed in 1967. Our goal is to keep the Pine, and Popple, and other rivers in a "wild" state through management.

New members of the Planning and Steering Committee of the Academy's project are: **Steve Field** and **Larry Seeger** (hydrology); **Cal Erickson** and **Phil Archibald** (wild rivers advisory policy committee); **Eunice Bonow** (bacteriology); **William Hilsenhoff** (aquatic insects); **Jack Mason** (fishes); **Russell Gilmore** (history); and **Clarence Milfred** (soils).—George C. Becker

Centennial Fund Progress Report

The Centennial Fund being collected by the Academy Centennial Committee to help finance the anniversary in 1970 is still receiving contributions. Three new members have been added to the "Centennial Club" (pledges of $100 or more): S. F. Darling, Appleton; F. G. Wilson, Green Valley, Ariz; and H. A. Schuette, Madison.—Walter E. Scott

People and Places

ROBBEN W. FLEMING (S 64), chancellor of the Madison campus since 1964, will leave the University to assume the presidency of the University of Michigan. An Illinois native, Fleming studied at Beloit College and the Wisconsin Law School. He taught at the University of Illinois for 12 years before returning to Wisconsin.

He has had extensive experience in settling labor and management disputes and is the author of several books on industrial relations. He continues to be interested in teaching, and hopes to have an opportunity to return to the classroom now and then when he goes to Michigan.

Prof. **JACK A CLARKE** (A 65) (UW, Library Science) is the author of the new book **Hugenot Warrior: The Life and Times of Henri de Rohan 1579-1638,** published by Nijhoff, Hague, Netherlands.

Prof. **G THOMAS TANSELLE** (A 62) (UW, English) is the author of the recently appearing

book published by Harvard University Press: **Royall Tyler.**

Prof. **GERARD ROHLICH** (A 65) received a citation for promoting high professional standards among engineers from the Wisconsin Society of Professional Engineers at the group's annual convention in Waukesha.

Prairie Press Books, Charleston, Illinois announces publication of a new poetry book by a Wisconsin poet, "Trillium and Mayflowers" by **MYRTLE COOK JACKSON** (A 61) (Shawano). The book is the recipient of the American Poets Fellowship Society publication grant.

Mrs. Jackson is also one of the editors of "Poems Out of Wisconsin III", a collection of unpublished poems by over 80 Wisconsin poets, published by the Wisconsin Fellowship of Poets. Printed by Castle-Pierce Co. of Oshkosh, the book will be available in October 1967.

Mrs. **JUANITA SORENSON** (AF 53) (UW, Education) has completed her term as president of the University League Newcomers this spring.

Prof. **ROBERT A. RAGOTZKIE** (A 60) (UW, Meteorology) was recently named to the Advisory Committee of the new Environmental Sciences Division of the National Science Foundation.

Prof. **ALAN D. CORRE** (A 65) (UWM, Hebrew Studies) has been awarded a National Humanities Fellowship for Younger Scholars for study in London during 1967-68.

In a rare action in March, the UW Regents named the new million-dollar medical school library in honor of a living person—Prof. **WILLIAM S. MIDDLETON** (A 36). Prof. Middleton was a member of the Medical School faculty for 43 years (including 20 years as dean) before he retired in 1955. From 1955 to 1963 Prof. Middleton served as chief medical director of the Veterans Administration.

The first annual publication of **Literary Monographs,** the first non-parochial publication of research monographs of English and American literature, is dedicated to **HELEN C. WHITE** (A 32). The new publication is sponsored by the UW English Department. Academy members serving on the editorial board include: Profs. **HARRY H. CLARK** (A 30), **RICHARD N. RINGLER** (A 62), and **HERBERT F. SMITH** (A 62).

Prof. **ROBERT F. BLACK** (A 61) (UW, Geology) was appointed to the Committee on Space Programs of the National Academy of Sciences in March. It was announced in April that Prof. Black will head a feasibility study of the use of modern visual techniques in teaching undergraduate courses in geology. The study will be conducted by the Committee on Institutional Cooperation and is financially supported by the National Science Foundation. The Two Creeks Forest Bed at Manitowoc on the shore of Lake Michigan has been chosen as the demonstration site for the pilot project.

UW President Emeritus **EDWIN B. FRED** (HL 21) was honored at a cake-cutting in celebration of his 80th birthday on March 22.

Two Academy members were honored this spring by Phi Kappa Phi, national honor society. Regent CARL E. STEIGER (L 54) (Oshkosh) and Prof. **ARTHUR D. HASLER** (A 40) (UW Zoology) were made honorary members of the organization.

Prof. **ARTHUR P. BECKER** (A 60) (UWM, Economics) has been named director of research by the Robert Schalkenbach Foundation, publisher of the **American Journal of Economics and Sociology.**

President **WALKER D. WYMAN** (A 63) (WSU-Whitewater) has resigned his position effective July 1. He will resume his career in teaching and research at WSU-River Falls where he was a faculty member for 30 years prior to his move to Whitewater. Prof. Wyman has been appointed Centennial Year Professor of History at River Falls, a post especially created to mark the centennial of the State University system.

Two UW School of Pharmacy professors have received honors from the American Pharmaceutical Association. Associate Dean **LOUIS W. BUSSE** (A 61) received the $1,000 Lederle Award for Advancement of Pharmacy and Prof. **TAKERU HIGUCHI** (A 49) received the $1,000 Smith, Klein and French Award for Stimulation of Research in Pharmacy.

Prof. **GARETH W. DUNLEAVY** (A 59) (UWM, English) has been initiated into Phi Beta Kappa at Clark University, Worcester, Mass., where he earned his first degree.

Prof. **HANS H. REESE** (A 42) (UW, Neurology) was elected president of the Friends of the University of Wisconsin Library at their April meeting.

MRS. RALPH A. MCCANSE (AF 55) (Madison) was named YWCA Vice-President for the Central Region at the early May, Twenty-fourth National YWCA Convention in Boston.

Prof. **ARTHUR H. ROBINSON** (A 65) (UW, Geography), has been named Lawrence Martin Professor of Cartography for 1967-68.

In April, Prof. **ROBERT ELLARSON** (A 47) (UW, Wildlife Ecology) received the 1967 Wildlife Society Conservation Education Award at the North American Wildlife and Natural Resources Conference held in San Francisco.

Emeritus Prof. **M. STARR NICHOLS** (A 61) (UW, Chemistry) was awarded a 50-year Membership Certificate by the Wisconsin Section of the American Chemical Society.

A new book published by the UW Press contains Chapters by two Academy members. Prof. **FREDERICK G. CASSIDY** (A 54) (UW, English) wrote the beginning chapter to **Approaches to Linguistic Methodology:** "A Descriptive Approach to the Lexicon". Prof. **LESTER W. J. SEIFERT** (A 47) (UW, German) wrote the chapter entitled "A Contrastive Description of Pennsylvania German and Standard German Stops and Fricatives".

The Conservation Centennial Symposium was held at the State Historical Society of Wisconsin on Saturday, May 6. The theme of

the symposium was "The Quest for Quality in Wisconsin". Academy members participating in the symposium included Prof. **SCOTT M. CUTLIP** (A65) (President, SHSW), and **WALTER E. SCOTT** (L40) (WCD, Madison).

Mr. Scott presented an impressive paper on "Conservation's First Century in Wisconsin: Landmark Dates and People".

WILLIAM M. LAMERS (A39) (Wales), vice-president in Arts for the Academy in 1964-65, recently was elected to an unprecedented 15th term as president of the Milwaukee Museum board of trustees. An assistant superintendent of Milwaukee schools, Mr. Lamers has been a member of the museum board since 1949 and was first chosen to head it in 1953.

On April 21 Mr. Lamers was the featured speaker at the annual dinner meeting of the Lincoln Fellowship of Wisconsin held on April 21. Dr. Lamers' presentation was entitled "Lincoln and Jefferson Davis, the Problems of Two Presidents".

Dr. **GEORGE C. BECKER** (A 42) (WSU-Stevens Point) has won a Johnson Award for excellence in teaching. His special fields are limnology and ichthyology. This award, established by the Johnson Foundation of Racine, honors a distinguished teacher in each of the nine state universities every two years.

Dr. Becker has also been elected president of the Wisconsin Society for Ornithology.

Dr. **EDWARD NOYES** (A 60) (WSU-Oshkosh) organized a workshop in state and local history, with partial emphasis on lake shore Wisconsin, which was held during the last two weeks of June.

Mrs. **JACQUE D. VALLIER** (A 56) (Fox Point) was given an annual conservation award at the zone 8 meeting of the Garden Clubs of America in Des Moines, Iowa. She is president of the Green Tree Garden Club of Milwaukee and was its conservation chairman for several years.

UW Chancellor **DONALD R. MCNEIL** (A 65) (Extension) was featured in the "Know Your Madisonian" section of the May 7th Wisconsin State **Journal.**

WILLIAM J. P. ABERG (A45) (Madison) who helped design the independent Conservation Commission system in Wisconsin 40 years ago, was honored at the Annual Meeting of the Wisconsin Division of the Izaak Walton League of America in Madison on May 7. Mr. Aberg is a former Conservation Commission Chairman and a founder and director of the National Wildlife Federation.

TERRENCE INGRAM (A 65) (Platteville) reported Wisconsin's largest living tree—a cottonwood located northeast of Platteville.

Retirements

MARY A. DOHERTY (A46) officially retired from teaching in June, 1964, but has continued to teach at the UW-Kenosha County Campus on a part-time schedule since September, 1965.

Born in Cherokee, Iowa, Miss Doherty completed high school there in 1917 and attended Iowa State Teachers College where she received her B.S. degree in science and chemistry. She did graduate work at Marquette University (M.S., 1941), George Peabody College, University of Denver and Northwestern University.

She began her teaching career in a country school in Cherokee County before starting work on her degree. In 1921 she came to Mary D. Bradford High School in Kenosha and taught chemistry there until her official retirement. Before assuming her post-retirement teaching duties, Miss Doherty spent six months travelling in Japan.

Her intense interest in encouraging youth to pursue scientific careers began in 1921 when she created the Science Seminar Club at Bradford. She is one of the original members of the State Committee of the Wisconsin Junior Academy of Science and was the motivating force which extended the WJAS program to the junior high school level in 1948. Miss Doherty served as a member of the

Board of Directors of the Southeast Wisconsin Science Fair from its inception in 1954 until her retirement. She continues to serve on the Board of Directors of the Kenosha Science and Engineering Council.

Many honors have been bestowed upon Miss Doherty for her work with youth. In 1963 she received a Distinguished Service Citation from the Academy for her many contributions and continued support. The Milwaukee Section of the American Chemical Society honored her in 1958, 1962, and 1963 for "great service to chemistry in the Milwaukee area", for "service rendered as a science teacher" and for "superior teaching as demonstrated by the achievements of her pupils".

In 1962 she was cited by the Wisconsin Society of Professional Engineers for "outstanding representation of the science and mathematics teachers in Wisconsin".

Miss Doherty plans to continue her part-time teaching activities and hopes to find time to commit to paper her recollections of the emergence of the extra-curricular science activities for youth.—J. R. A.

THEODORE F. (TED) KOUBA (A54), who was on the staff of the U.S. Forest Service in Wisconsin for many years, retired from that Service at the end of 1966 when his Division office was moved to Pennsylvania. He and his wife returned to Madison from Milwaukee and he is temporarily working with the Research and Planning Division of the Wisconsin Conservation Department.

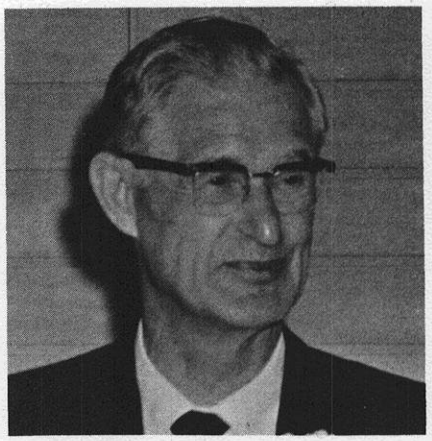
Mr. Kouba, who was born in Iowa in 1902, graduated from Iowa State University in 1926. Immediately afterward he joined the USFS and literally "took to the hills" on an assignment to buy wornout farmland in Arkansas for the Ouachita National Forest. Living among the mountain farmers was an experience in pioneering, and that phase of his career continued when he transferred to Wisconsin in 1929 to join the Land Economic Inventory. During 1930 the rapidly spreading white pine blister rust was threatening reproduction of this valuable forest tree in Wisconsin. Accepting the challenge to help protect the trees from

this devastating disease, Mr. Kouba worked for the federal government and cooperated with local state agencies and individuals to develop new techniques of control. He participated in research projects with scientists of the University of Wisconsin and the conservation department in developing white pines resistant to blister rust and in determining the micro-climatic conditions favoring control of the disease. Both studies have provided major contributions to blister rust control work. In 1957 Mr. Kouba was transferred to the North Central States Regional office of the USFS in Milwaukee, where he specialized in state and private forestry programs in the nine-state region. For the next 10 years he assisted state conservation departments in forestation, forest management, information and education and watershed management.

Almost as important to him as his professional career is his hobby of finding Indian artifacts. Starting at the age of five on the home farm, he has developed through the years special techniques for finding old Indian campsites where artifacts could be found on the ground surface. His most recent "find" has been the location of one of the oldest Indian campsites in the midwest (in Dane county) used by nomad Indians intermittently some 9,000 years ago. Details have been published in a recent issue of **The Wisconsin Archaeologist.**

Mr. Kouba has been active in several conservation organizations and has served as president and on various committees of the Wisconsin chapter of the Soil Conservation Society of America, the Society of American Foresters, and the Charles E. Brown chapter of the Wisconsin Archaeological Society.—G.M.S.

OSWALD J. MUEGGE (A 48) retired in mid-1966 from his position as State Sanitary Engineer and Director of Environmental Health in the State Board of Health. Mr. Muegge was born November 5, 1900 in Wood County, Wisconsin and received his later education at the University of Wisconsin where he was granted the B.S. degree in civil engineering in 1923. Immediately afterward he joined the staff of the State Board of Health as an assistant sanitary engineer. He did graduate work at Harvard University and received an M.S. degree in sanitary engineering in 1937. Since 1949 he had been State Sanitary Engineer and a member of the State Committee on Water Pollution, serving as vice-chairman since 1955. He was active in many national professional organizations and held office in several, chiefly the American Water Works Association, of which he became a Life member in 1955. Mr. Muegge assisted on many working committees and task groups for national sanitation associations and on Wisconsin governmental committees. He was a member recently of an NSF special public health committee for special criteria for plastic fittings and pipe for corrosive wastes. He



served several years on the Wisconsin Natural Resources Committee of State Agencies and at present is a member of the Department of Resource Development Board.

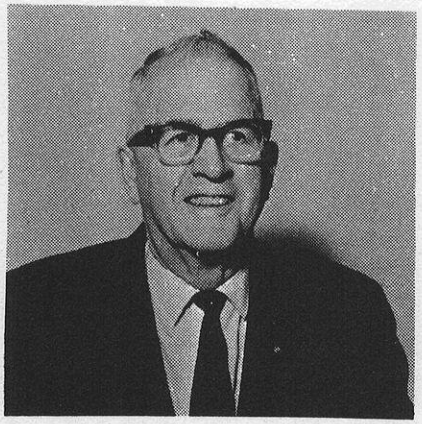
In 1959 he received the Fuller Award of the AWWA and "Engineer of the Year" award from the Wisconsin Society of Professional Engineers. The Water Pollution Control Federation gave him the Bedell Award in 1957. Mr. Muegge is a member of Delta Omega honorary society.—G.M.S.

EDWARD J. VANDERWALL (A 42) completed 39 years of service with the Wisconsin Conservation Department in March 1967. He was born in Phillips, Wisconsin on February 11, 1902 and attended Ripon College, where he received the Ph.B. degree in 1924. He also attended the University of Wisconsin. Beginning his career with the department as a forest ranger in 1930, he advanced to chief forest fire warden in 1934 and held that position until 1942. Under his leadership at this time,

basic fire control concepts still in use today were developed. Numerous ranger stations and a telephone network were constructed and at the new forest protection headquarters at Tomahawk, the first state-owned airport and hangars were set up. Specialized fire fighting equipment was designed and made and a fixed detection system of lookout towers was constructed. In 1936 Mr. Vanderwall appeared before an international communications conference in Washington and obtained the first radio frequency assignments for conservation work for any state. Under his initial guidance, Wisconsin instituted a program of forest fire control which has eventually resulted in making the practice of forestry financially feasible in the state. He was appointed conservation director in October of 1942 and served throughout the war years until 1947, when he resigned that position to assume administrative duties in the forestry program until his retirement.

CORD O. WELLS (A 64) retired from WSU-Whitewater on June 30, 1967, terminating 42 years of service to that institution. He joined the faculty in 1925 as assistant principal of the campus junior high school and later taught psychology and served as director of academic education.

Dr. Wells served in the U.S. Navy during WW II and returned to Whitewater as registrar and Dean of Instruction. In 1964 he was named Vice-President of Academic Affairs. As dean and vice-president, he chaired the University Curriculum Committee and

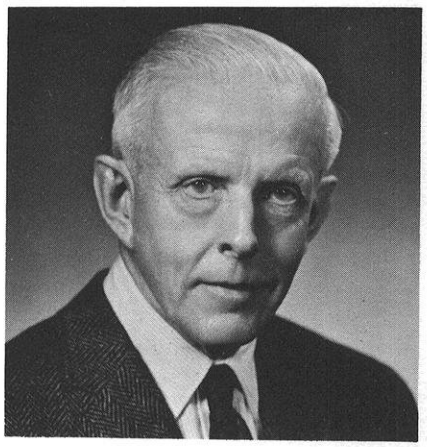


guided the curriculum development of the University during the period of greatest growth.

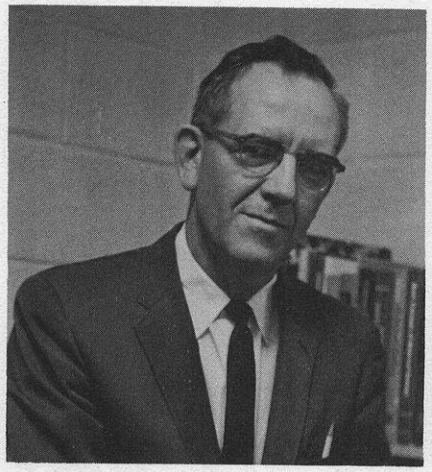
He has been active in community and campus affairs and was recently honored by the University by naming the first high rise dormitory "Wells Residence Hall". —J.R.A.

In Memoriam

HENRY C. GREENE, (A42) who was born in Fort Wayne, Indiana on Dec. 13, 1904, died at Tuscon, Arizona on April 27, 1967. He received his undergraduate degrees from the University of Washington and the PhD degree from the University of Wisconsin in 1933. From 1941 through 1966 he was curator of the University's cryptogamic herbarium. While he was considered an authority on parasitic fungi, he was also an excellent ecologist. In company with John T. Curtis, another eminent botanist from the University of Wisconsin, he made observations and botanical collections from southeastern Wisconsin prairies more than 20 years ago and began the development of a tract in the University's Arboretum as a permanent prairie study area. This 40 acres in the Grady Tract was dedicated as the "Greene Prairie" shortly after his death in a memorial service, where he was to have been honored guest. Prof. Greene served as secretary of the Arboretum Committee for over 20 years and was editor of its **Arboretum News** from 1952 to 1962. He was author of several papers, with Curtis, dealing with development of the prairie.

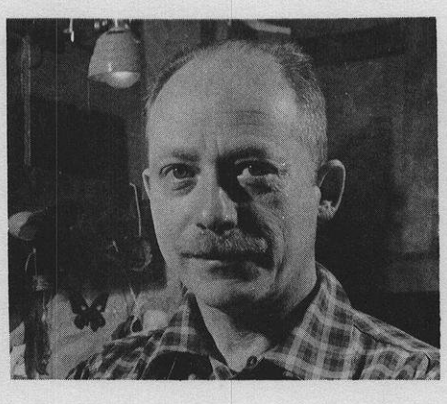


MELVIN L. WALL (A60) was born in Holton, Kansas on Dec. 27, 1912 and was killed in a plane crash in South Viet Nam on March 25, 1967 while with a survey group of educators serving with the U. S. Agency for International Development. He attended high school at Hawkins, Wisconsin and received the B. S. degree at Wisconsin State University, River Falls, in 1936. After teaching for two years, he studied at the University of Wisconsin, received the M. S. degree in 1939, and joined the faculty at River Falls in 1940. In 1957 he was awarded the PhD



degree from the University of Wisconsin and at the time of his death was chairman of the plant and earth science department at River Falls. During 1940-45 he spent the summers in soil conservation work in Vernon county. He was active in civic and community affairs and was chairman of the campus development committee at River Falls. He did much of the planning for a committee project, the beautification of the South Fork area of the campus, and an amphitheater he planned was designated the Melvin Wall Amphitheater by the Board of Regents. Prof. Wall also was honored in a series on leading agronomists published in **Crops and Soils Magazine.**—Adapted from Falcon Features, WSU, River Falls.

Cover Profile



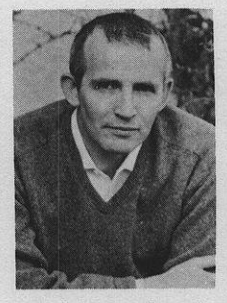
The cover feature for this issue is "Summertime Wisconsin", painted by **AARON BOHROD**, distinguished American painter and University of Wisconsin artist-in-residence.

In his brilliant portraits which have been published in Look, Life and Time, Aaron Bohrod captures as the unaided eye cannot the surfaces and structures of the things of life. He sees and shows us so deftly the aspect of eternity that is the passing phenomenon.

As Frank Getlein has written, "like every great painter in history Aaron Bohrod has something for everyone, from the recognition of familiar objects, and the perception of meaningful composition, to the pleasure of looking at a beautiful painting" that can have its deeper meanings.

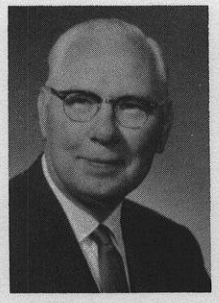
About the Authors

Dr. **DONALD R. MCNEIL** (A65), who has so graphically presented the "new look" for University Extension, was appointed Chancellor to head the merger of the three extension agencies in October, 1965. Dr. McNeil has had wide experience in his major fields of American history, education and writing, and prior to his appointment as Chancellor, was a special assistant to UW President Fred Harrington.



Dr. **BELDEN PAULSON** is Associate Professor of Political Science at UW-M, and through University Extension has developed projects in Milwaukee's "inner core", working closely with the Negro community. His recently published book "The Searchers" is a dramatic story of conflict and Communism in an Italian town, based on his own experience in living in this community.

MRS. BARBARA KUHLEN is assistant to the Director of the Visiting Scientists Project, and secretary for both the Junior Academy of Science and the **Review** editor. This indispensable "right-hand man" is also an editor—for the Journal and formerly for the Newsletter of the Wisconsin Speleological Society, an organization devoted to the scientific study and preservation of caves.



GORDON BUBOLZ (L64) is a busy man—with a considerable record of community and conservation achievement! He is president of three insurance companies, member of a law firm, and chairman of the Northeastern Wisconsin Regional Planning Commission. While a member of the Wisconsin State Senate, he was responsible for the authorization of an interim study of the Wolf River Region. The outcome was the establishment of the Regional Planning Commission in 1962.

Past President **DAVID BEHLING** presented a stimulating view of man's historic search for security in his Presidential Address at the Annual Meeting. Mr. Behling is Editor of Field Publications at the Northwestern Mutual Life Insurance Company in Milwaukee. He has been very active in Academy affairs, serving as Treasurer for five years, and as President.

Our guest editorial writer, Dr. **REZNEAT M. DARNELL**, is the Academy's newly elected Vice-President in Sciences. Here he has probed into a vital area of thought and action.

THE FALL GATHERING OF THE ACADEMY

Scheduled to coincide with the height of autumn coloring in superbly scenic Door County is the fall meeting of the Academy. Mark the date October 7 now on your calendar and plan to both attend and participate in the activities which are being arranged to make it a rewarding weekend.

Emphasis will be on outdoor activities for Saturday. Field trips are being planned to places of cultural and scientific interest such as The Ridges Wildflower Sanctuary, The Clearing, and if weather and arrangements permit, the new state park on Rock Island northeast of Washington Island in Lake Michigan. Headquarters for the meeting will be the Anderson Hotel, Ephraim. The fall gathering is in charge of Harold Wilson, Ephraim.

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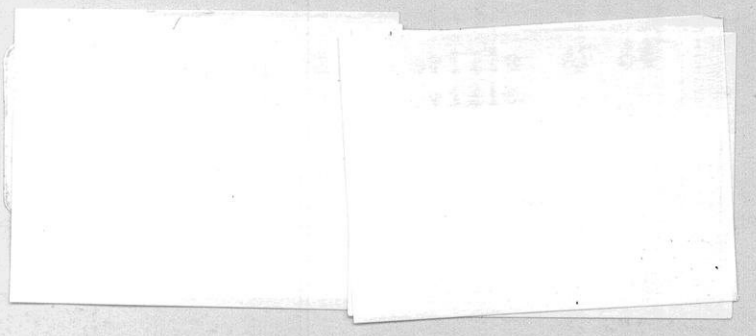
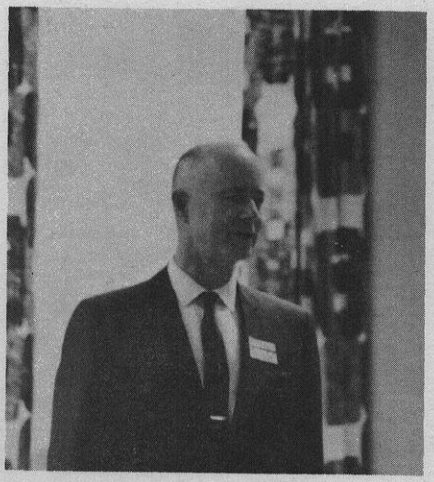


At the Junior Academy Statewide Meeting in Oshkosh, Randy Van Boxtel, Hilary Ziven, and Sharon O'Malley.



Hats off to Charles Goff, of WSU-Oshkosh, chairman of local arrangements for the Annual Meeting!