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WISCONSIN ACADEMY REVIEW

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Editorial Excerpts

FROM THE WRITINGS OF ERNEST SWIFT

"In discussing LAND, the word must be expanded to its fullest definition as the fountain-head of all resources which form the chain of life from simple cells to the most complex associations of plants and animals. In other words, the life community, which is becoming more and more a common term.

"Treating the land as an inexhaustible mine became an early established pattern and a symbol of rugged initiative and enterprise. As timber was cut and burned, when soil was exhausted, when the game was killed off, people from the East packed up and headed further West. And as they depleted the land and moved on they left a backwash of the defeated and discouraged, who in later years became problems for rehabilitation. Appalachia is a prime example of an area where both resources and people have deteriorated together."

"Now we are beginning to demand a new evolution in values. It is a rather ragged cycle from uninhibited and sometimes ruthless exploitation to a conservation conscience, but cycle it is. More leisure resulting from technological advances has not produced the cultural plateau anticipated. There are certain values and intangibles in life which a cold, push-button existence cannot satisfy. Computers do not bring forth perception and intellectual equilibrium.

"Progress is now taking on a new dimension which cannot be measured by two automobiles per family, wall to wall carpeting or Hi-Fi. The American people are beginning to feel cramped for space and want a high quality out-of-doors, even though they tend to abuse it. Something is being lost, they know not what. They are wondering what civilization has done to them."

"If the human race is to assume "dominion over the fish of the seas, and the fowl of the air, and over the cattle, and over the earth and every creeping thing that creepeth upon the earth", there goes with this an accompanying responsibility for a super conscience. As yet that super conscience has not become apparent. Assumption of the responsibility rests as much, if not more, on a moral fulcrum than on cold-blooded scientific inquiry whose only conscience comes from the fumes of test tubes.

"This in no way implies abandonment of civilization, but it does mean a mature discrimination and discernment to fit our actual needs within the limits of the available resources."

"Collective ownership seems to diminish personal responsibilities, and land-use practices will not improve on public lands until humans improve in ethics and common decency."

"I like winter because of its uncompromising challenge. Even with modern conveniences, a good old-fashioned winter does not allow too many stupid mistakes or total irresponsibility . . .

"There are low, scudding clouds of late afternoon, and the sharp rattle of popple branches as night closes down, bleak, cold and uncompromising. The pace is increased to keep the blood circulating and ear laps are pulled down. The winter wilderness seems ready to strike if there is some breach of judgment, such as falling into a spring hole or losing direction. That is part of the fascination of the snow country, the potential risk . . .

"Winter is a magnificent season of the year, and its educational lessons in resource management are just as important as any other. It has a great challenge if one likes challenges, and a pair of snowshoes is the proper means of travel to properly absorb all of winter's wonderland. Do this and the year of the big snow will not be wasted."

EGYPT'S AGRICULTURAL DILEMMA

By Arthur E. Peterson

HUNDREDS OF members of the University of Wisconsin staff have helped to extend the "Wisconsin Idea," not only beyond the boundaries of the state, but to more than 50 countries on every continent of the world. I was fortunate to have been one of them—with the unique and challenging opportunity of trying to improve the food production in the very birthplace of modern agriculture and civilization as we know it today—part of the Fertile Crescent of Biblical days, the Gift of the Nile—EGYPT!

Why does the University grant leaves of absence for such assignments? It is a matter of mutual cooperation and benefit. The knowledge and experience that a consultant can provide will greatly shorten the time required to reach the project objectives. Also the consultant's knowledge and understanding will be greatly enriched and broadened by continuing similar work under somewhat different conditions.

To most of us the word Egypt has always meant visions of pyramids, temples, sphinxes, mosques and bazaars, but today we must add items like the Aswan Dam, the idle Suez Canal, crude oil, fertile fields, endless desert and 33 million people.

For some 4,700 years the Nile River has meant life to this area, since it never rains and all crops must be irrigated. All that is growing and alive in Egypt clings to the river, either to the many branches and canals in the delta, or to the flood plain that varies from 2 to 13 miles in width.

As the snow has melted every spring in the Ethiopian mountains, the Nile has flooded into the Egyptian valley and left a black silt that provided a fertile seedbed. Had the Nile flood been more destructive, it might have prevented civilization from developing on its banks, and had it been tamer, it might have permitted the people to adopt a very leisurely type of living. However, the Nile, throughout the

Soil tillage on an experimental farm.

ages, has been the ideal educator, neither too stern nor too permissive. Sometimes these annual floods were too sparse, and sometimes overwhelming, but always unpredictable. Thus the annual flood variation required planning of food production for more than one year. How to best use the limited water, what dikes or ditches to build, how much man-power would be needed for planting and harvesting, and how much food to be stored? The Nile left the Egyptians no choice but to calculate and organize. The Bible records in Genesis 41 that Joseph accurately predicted the seven years of famine. This was the first and only accurate long-range weather prediction that has been recorded to this date!

The productive valley of the Nile has always been protected from invaders by vast stretches of barren desert. The desert begins where the Nile water ends. Anyone coming to Egypt, whether by air or sea, sees that Egypt is truly a land of sand and water. The Nile and its flood plain stretch southward like a long, slender snake in a mammoth sand box. On the west is the Western or Libyan Desert and on the east the mountainous Eastern or Arabian Desert. The river rises in central Africa and travels 4,200 miles to the north largely through the desert land of Sudan and Egypt. It drains one-tenth of Africa or an area twice the size of Alaska. The Nile travels some 700 miles in Egypt, but an additional 1,200 miles of canals help to carry its water to other areas for both irrigation and transportation.

The real problem facing the United Arab Republic now is the necessity of feeding 33 million Egyptians with only 6 million acres (by growing 2 crops per year this figure approaches 11 million) of tillable land. In Wisconsin we have some 10 million acres under cultivation, with a population of about 4 million. Egypt's huge population is squeezed into the only areas where water is available—near the Nile—and the rest of the country—the desert—is largely uninhabited.

Soils presently being cropped are the recent seashore depositions and the Nile River flood plain and delta sediments. The seashore depositions occurring west of Alexandria to the Libyan border are mostly dolomitic limestone. This material is being blown landwardly from the exposed shores of the Mediterranean Sea. These limestone dunes are stabilized by the formation of hardened surfaces of carbonates.

Most of the sediments of the Nile originate from the Blue Nile. The swift current from Khartoum to Aswan has prevented deposition of sediments in by-gone years. The current kept its suspension of clay and most of the silt until it passed over the first cataract at Aswan. Then the velocity of flow lessened and the silt was deposited between the first cataract and Cairo. The sediments of the delta consist of materials which have been exposed for some time, recently exposed clays and submerged silts and clays of the Mediterranean Sea. However, since July, 1966, the Aswan Dam has been filling the 300-mile-long Lake Nasser. The Nile will flood no more and the sediments are now all being deposited in Lake Nasser. Fortunately, recent developments in agricultural technology will be able to offset the loss of the crop-producing value of these sediments.

As one means of alleviating the acute food shortage caused by the large number of people on such limited land areas, the U.A.R. Ministry of Agriculture joined with the Rockefeller and the Ford Foundations in establishing an accelerated program to boost corn production. I served as resident consultant for this project from its initiation in February, 1966 until June, 1967, when the outbreak of the Arab-Israeli war abruptly ended my stay. I returned to Egypt in March, 1968, to observe the

ABOVE: Workers in field for irrigation of corn.

MIDDLE: Field just seeded to clover, following corn harvest and flooding.

BELOW: Raising water for irrigation—the method used on most of the farms in the delta.

progress on the project, and to make recommendations to the Ford Foundation on how the project can best be reopened.

The U.A.R. Ministry of Agriculture has its headquarters and an experimental area in Cairo, near the Giza pyramids. We organized a "Maize Improvement Committee" composed of heads of the various departments within the Ministry of Agriculture which had a responsibility in corn production. These included plant pathology, entomology, soil chemistry, agronomy, irrigation, genetics, and statistics. All members had received graduate training in the West, usually in the U.S. The committee formulated methods and goals for the program, then conducted extensive research at 4 of the 10 outlying experimental stations operated by the Ministry of Agriculture. To test each of the slightly varying growing conditions within Egypt, the committee chose stations on (1) the flood plain near Cairo, (2) on the flood plain 100 miles south of Cairo, (3) in the delta region 75 miles north of Cairo, and (4) on the newly reclaimed desert land about 100 miles northwest of Cairo.

Studies at these stations included experiments such as: (1) date of planting, (2) population and spacing, (3) varieties, (4) amounts, time and type of nitrogen fertilization, (5) disease resistance, (6) soil insects, (7) time and frequency of irrigation, (8) thinning date, (9) fertilizer and seed placement, (10) weed control, and (11) population, variety and fertility interaction. The Middle East war interrupted plantings in 1967, but in 1966 maximum plot yields of 150 bushels per acre were obtained. (In the U.S. our Midwestern farmers normally obtain about 80-85 bushels per acre.) Currently the Egyptians are averaging 60-70 bushels per acre, but they can undoubtly double their yields.

This is possible since Egypt is actually an "outdoor greenhouse!" It is one of the few nations in the world where all crops are grown entirely under irrigation. The temperature averages 59° F, and peaks of 110° F are not unusual. However, the high summer temperatures are bearable because of the dry air typical of the desert climate. In the upper part of Egypt it never rains, and only traces are received in Cairo and most of the delta. (An Egyptian friend one day reported a 5-inch rain at the city of Minya—that means a rain with the drops 5 inches apart!) Since the sun shines continuously every day, it is possible for the crops to carry on more food-producing photosynthesis in each growing season than in the humid parts of the world, regardless of day length.

During April and May the hot desert wind, the unpleasant *khamsin,* blows and brings in several dust storms, usually lasting between 2 and 3 days. June, July, and August are the hottest months, but due to the desert climate, there is a comparatively big drop in temperatures during the night. Cairo is located at 30° N latitude (similar to Houston, Texas), and has very cool weather during December, January and February with the temperature usually dropping to freezing several times during those months.

Field crops are grown throughout the year, and a crop sequence (and the growing period) for two years would be: Corn (May-October), clover (October-February), cotton (February-October), wheat (October-May), corn—etc. In the north delta areas when salinity becomes a problem, rice will be grown instead of corn. Nitrogen is the main fertilizer needed and used, with the pounds per acre of nitrogen applied to the various crops and their yields as follows: Corn 60-90 pounds nitrogen with yields about 70 bushels per acre; wheat 40-60 pounds of nitrogen per acre with yields of 60 bushels per acre; and rice, about 60 pounds of nitrogen with yields of about 40 bushels per acre. Most of the crops are irrigated about every 18 days by flood irrigation and often are overwatered.

Agricultural extension, as well as research, is the responsibility of the Ministry of Agriculture. The universities have the sole responsibility for teaching, although lim-

ited research may be carried on for graduate degrees. Some 4,500 "Agricultural Engineers" (all agricultural graduates) are located throughout the farming areas. Each one is responsible for the agricultural practices (planting date, fertilizer, crops, insect control, harvest, marketing, etc.) for approximately 1,500 acres. The Agricultural Engineer works out of the Agricultural Cooperative, which handles the seed, fertilizer, pesticides, etc. that is necessary for growing the crop (and also purchases the crop). No-interest credit is advanced to the farmer, and repaid at the harvest. These cooperatives have a tractor and digger available on a "custom" basis for "plowing" the fields. Practically all field work is done by animal or hand. Custom spraying is the exception.

In Egypt factors which we in America consider uncontrollable, such as rain, temperature and frost, are never a problem. But controllable factors such as disease, insects and nutrient availability are not presently controlled adequately in Egypt. Thus the challenge is to tie all necessary cultural practices together and also develop hybrids that are more suited to the Egyptian climate. The Maize Improvement Committee is currently working in these areas.

The land shortage coupled with the U.A.R.'s large population has generated the practice of farming almost entirely by hand or with animals. Today an average Egyptian farm consists of 1 to 3 acres of land, while one man cannot legally operate more than 50 acres. Complete mechanization of the agricultural sector would result in massive unemployment.

However, mechanization on a small, garden-type scale would help to increase human food production (In the 30's and 40's, for example, most Wisconsin farmers changed from horse to motor power and released thousands of acres of land for production of human food.) Cashing in on fossil fuel, that is oil and gas, produced by the sun's energy millions of years ago means less heavy labor for men and animals. Soil tillage, for example, could be done more efficiently by machine—and done without expending the current year's solar energy in terms of crops consumed by men and animals who now perform practically all the work. Then, too, these animals could be better utilized in producing meat and milk. Mechanization will increase efficiency but not necessarily agricultural productivity, since maximum production can often be obtained by very inefficient methods.

At first glance, increased efficiency and human food production through mechanization or better farming methods may seem to be a limited solution to Egypt's food shortage. Why not simultaneously add to the total cultivated acreage by reclaiming desert land? Many people have the idea that you can make the desert bloom if only you have access to water. This simply is not true. Even with the completion of the gigantic Aswan Dam in 1970, a 10-20 percent increase in cultivated land in the UAR will be good luck. An acre of desert land, reclaimed at a cost of about $1,000, can never be as productive as an acre of delta or flood plain land, since basic differences in such characteristics as soil texture and soil salts have a great effect on long-term crop production.

The popular myth that a breakthrough on the costs of desalination would turn the arid parts of the world into a Garden of Eden must also be challenged. If reclaimed salt water were available at no cost at sea level, the pumpage and transportation (about 10 cents per 1000 gallons per 100 miles) cost would make widespread distribution for agricultural purposes prohibitive. Agriculture now pays only about one cent per 1000 gallons for irrigation water, thus, the cost factor supplies the answer.

We must realize that the feed-food-fibre for future generations will have to be produced in areas of the world where soil moisture is renewed annually by natural precipitation. Future breakthrough in desalination methods may reduce such water costs so

An excellent field of onions.

that it will not be prohibitive for agricultural uses except for very specialized crops.

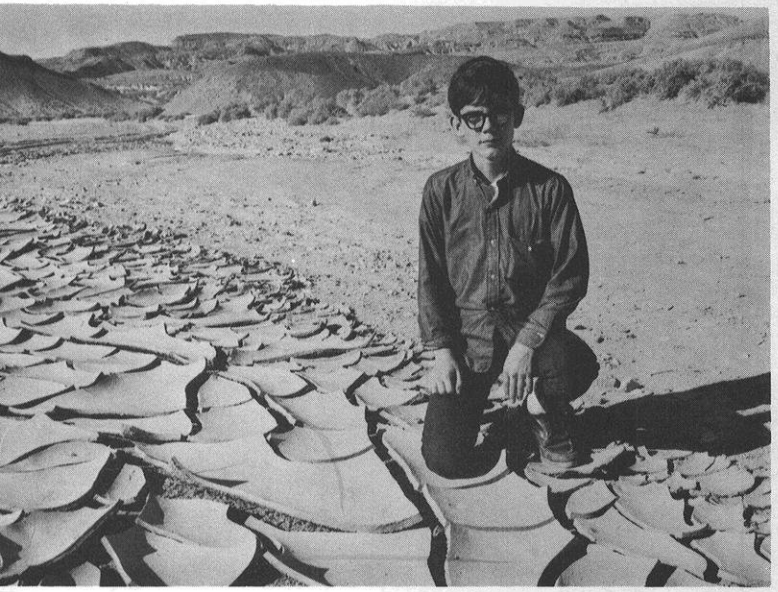
Comparing the agricultural production of Egypt to that of the world, and using poor-fair-good-excellent for comparison, most crops grown in Egypt would rate about good. However, because of the controlled growing conditions, they should rate excellent. Thus the possibilities for further increases in crop production in the U.A.R. are considerable. Yet with each increment in yield, the job becomes more difficult. With each step greater coordination and team work is required. Nature has excellently endowed Egypt with the basic requirement for high crop yields—soil, water, light and temperature. With the proper utilization of these basic elements Egypt can supply its ever-growing population with about twice as much food and also can clearly demonstrate how modern science can be put to work in producing crops of corn, wheat and rice with the highest average-unit-area yield of any country of the world, on land that has probably been cultivated continuously for a longer period than anywhere else in the world.

The difficulties of providing enough food for a population growing at an annual rate of 3.3 percent are by no means easily resolved. In Egypt, as in most developing countries, this birth rate becomes more significant and critical when compared with the annual increase in food production, which is often only about 2 percent.

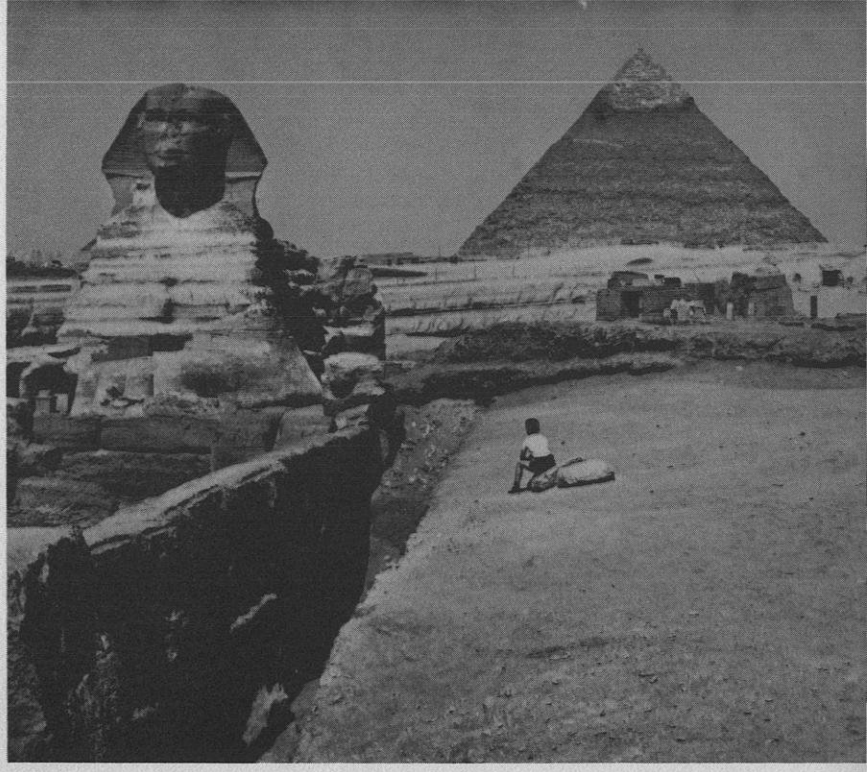
Population planning must advance as well as agricultural programs if hope for any satisfactory solution is to be realized. The final solution to the agricultural problems of Egypt and the developing world can only be population stabilization. Our increase in agricultural production will only buy time. This time is critical for the next 10 to 20 years. But no matter how successful we are in in-

Ancient gods from temple at Luxor.

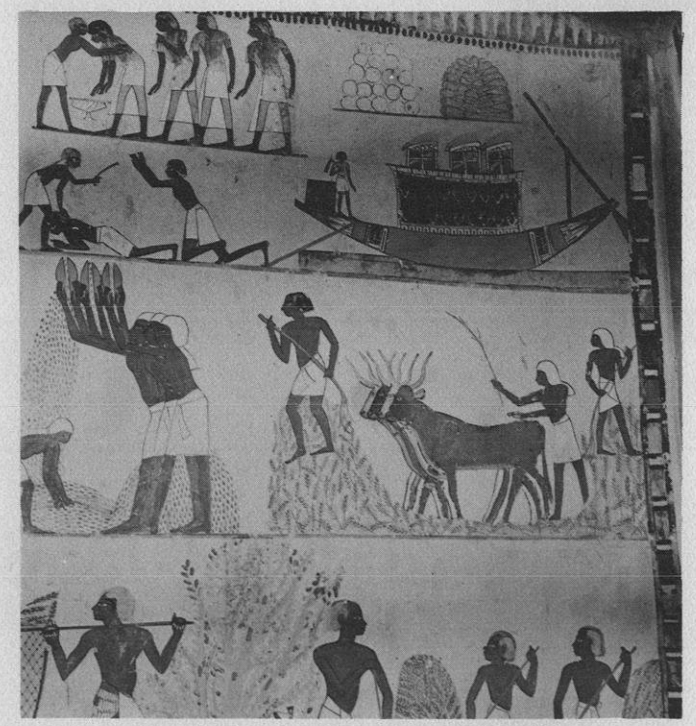
Clay cracking upon drying in a water run in Sinai.



creasing agricultural yields, unless the men working on population stabilization succeed, we in agricultural production are doomed to failure. We can talk number of people and tons of food, but most people overlook the important third dimension, for how long. Regardless of temporary increases in food production, time will surely prove to each and everyone of us —that death control without birth control can lead only to chaos. Let us hope that in this country, by the time we have recorded 4,700 years of "civilization" as have the Egyptians, we will not be splitting the "pie" as thin as they are today in Egypt.

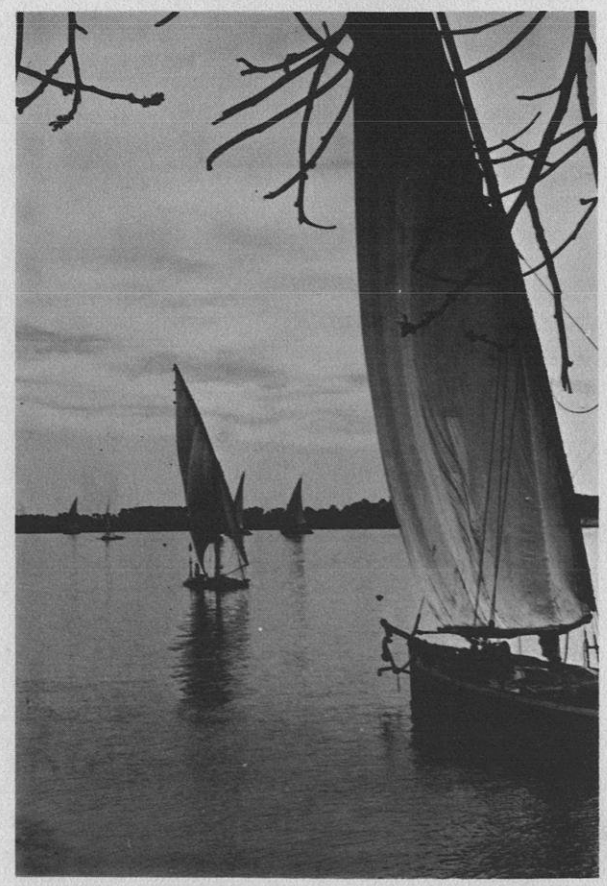


The sphinx and pyramids at Giza.



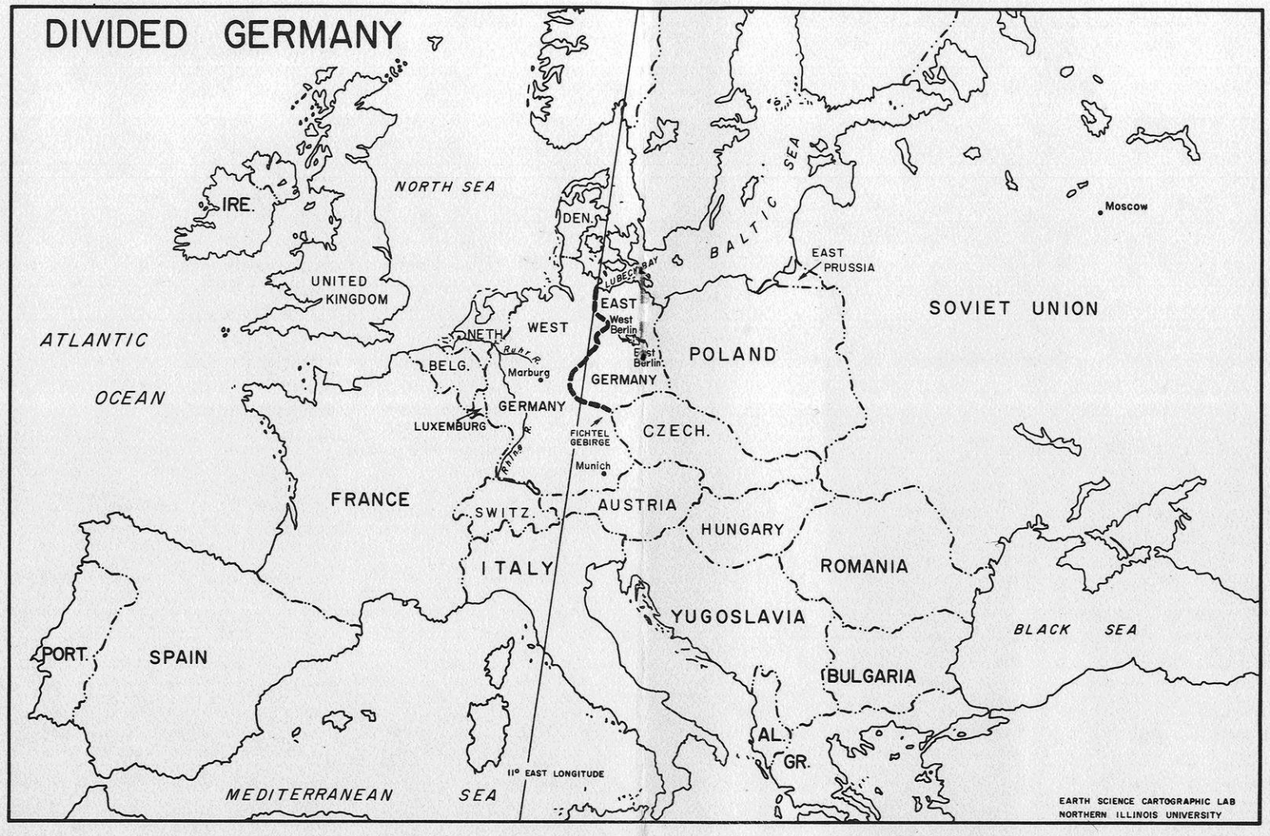
Tomb of the nobles at Luxor. Agricultural scene dating from about 1400 B.C. shows thrashing of wheat and transporting by Nile boat to the city.

The ships on the Nile near Cairo.



A GEOGRAPHER LOOKS AT A POLITICAL CONUNDRUM

By Jack R. Villmow



Divided Germany

THE MOST recent in a series of texts dealing with European geography * treats the German area in two chapters: "The Regions of Germany" and "Divided Germany". Since textbook writers and publishers of textbooks have two major objectives—**being** up to date and **remaining** up to date—it is immediately apparent that in America at least there is reasonable expectation that the "temporary division" of Germany which has survived two score years and two has now been elevated to a more than temporary status.

Germany in Europe

The German area occupies a central position on that western peninsular appendage of Eurasia called Europe. It is not very different in size from the other countries of Western Europe—it is smaller than France or Spain and larger than the United Kingdom or Italy. However, it has a population greater than any of the other political units, and, in fact, Western Germany **alone** has more people than any other European country with the single exception of the Soviet Union.

An irregular line drawn southward from Lubeck Bay, an arm of the Baltic Sea, to the western tip (the Fichtelgebirge) of Czechoslovakia and approximately the 11° E. meridian of longitude marks the present **internal** political frontier of Germany. As a political boundary line it has more meaning than **any** of the **external** political frontiers of both Western and Eastern Germany. Political neighbors of Western Germany include: Denmark, Netherlands, Belgium, Luxemburg, France, Switzerland, Austria, Czechoslovakia and Eastern Germany. Eastern Germany has these political neighbors: Poland, Czechoslovakia and Western Germany. Further, the probability is very great that the political boundary line within Germany, **between the two Germanys,** is the most effective political line for demarcation in the entire world with the possible single exception of the wall which now surrounds West Berlin—an exclave of Western Germany—and separates it from surrounding Eastern Germany. Increasing numbers of atlases are giving "status" to the political boundary line between Western **and** Eastern Germany by drawing it with sufficient width and intensity to approach the eye-catching political boundary lines which surround other countries.

* *Europe and the Soviet Union,* by Norman J. G. Pounds. McGraw-Hill.

Boundaries of Germany

Although it is certainly the most extraordinary political boundary in the world, and therefore of great concern to the German people, Germany has another troublesome frontier. Its boundary with Poland today passes in its entirety through land formerly belonging to Germany; and in fact, the present **eastern** boundary of Eastern Germany lies, on the average, more than **100 miles west** of its pre-World War II location. Here Germany lost 44,000 square miles to Poland, and another 6,000 square miles to the Soviet Union largely as a result of the division of East Prussia between Poland and the Soviet Union. Population losses in the "eastern provinces" were far less significant because almost all the nearly 10 million Germans occupying these territories were forcibly repatriated into the newly diminished German area.

The Two Germanys

The two Germanys which today exist side by side are, in reality, exclaves of Washington and Moscow "influence" in matters ranging from policy-making on the political level to recreational activities of the teenage youth. The penny-wise tourist who wishes to see all the "sights" in Europe can see nearly the entire spectrum of all the best to all the worst of both Germanys by simply flying into Berlin and proceeding to tour the **two** Berlins where many, but not all, the characteristics of the **two** Germanys are presented most vividly and most compactly.

Statehood, Nationhood and Satellite Status

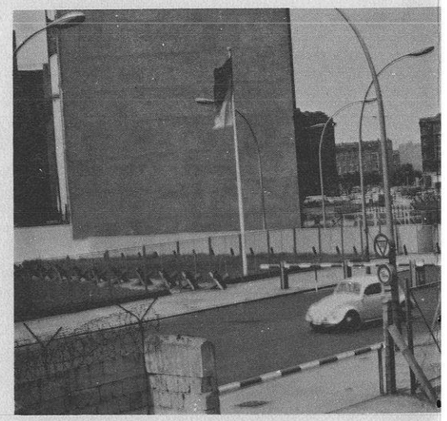
The degree to which the two Germanys are independent of one another is not entirely defined by the rigor of the political boundary line drawn between them. Application of two clearly stated definitions for the terms "state" and "nation" devised by political geographers, provides a useful exercise in this case. A **state** is defined as a well-defined piece of territory with a population permanently residing in it, organized as a government to which a great body of residents render habitual obedience **and which is independent of outside control.** By this definition neither Western nor Eastern Germany would completely qualify, but it is obvious that Western Germany comes far closer than Eastern Germany toward fulfillment of the criteria.

A nation is an areal association of all people of every social and economic class who feel they have such a degree of common interests and associations

The CBD (Central Business District) of West Berlin: underground railroad entrance in the foreground; ruins of the Kaiser Wilhelm Gedechtnis Kirche (Memorial Church) and new Europa Center in the background.

Kongresshalle, an exhibition and conference center in West Berlin very near the wall; built in part from funds of the Benjamin Franklin Foundation.

Three typical building types in West Berlin, from left to right: completely new; bare wall marking an area of removal; reconditioned building.

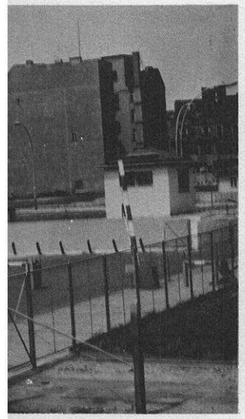


together as to form a unit distinct from other peoples and that their unit ought to constitute a state. Here, obviously, both Western and Eastern Germany cannot independently qualify; the accident of internal division cannot for a very long time, and probably never, erase the major factors in nationalism, via., a common language and common possession of memories of past victories, defeats, heroes (political or literary), etc.

The continuing exercise of strong Soviet influence upon Eastern Germany must mean that "satellite" is a far more appropriate term than "state" to define that territory; and the continuing division of the German-speaking peoples into two large population groupings means that neither Western nor Eastern Germany can qualify for nationhood. Certainly the fact that since 1871 the German-speaking area in Europe has had a greater population, food-producing ability, mineral resource base (primarily industrial coal), industrial capacity, and transport system than any other political unit except the Soviet Union, along with the strategic value of central position, have combined to make any subdividing of Germany or other reduction in its power potential (e.g., Morgenthau Plan) appealing to any power endangered by the German nation. Blocking the reorganization of Germany as a single free state and nation was, is, and will continue to be a part of Soviet policy—this appears clear to most observers of the German scene. If Germany were reorganized as a single free state it would again be the most powerful state and nation west of the Soviet Union and east of the United States of America. As such it would play a role infinitely greater and more dangerous potentially to both the Soviet Union and the United States of America, but especially to the Soviet Union, than it now plays.

Economic Significance

The two Germanys are often presented as contrasts in spheres other than political. It is often pointed out that the loss of territory east of the 11th meridian of longitude means the loss of Germany's breadbasket. In the German territory west of that meridian of course lie the coal-rich Ruhr, the iron-steel-chemicals-textiles complex of the lower Rhine valley, and the mightiest of the world's commercial waterways—the



Checkpoint Charlie looking toward East Berlin; a single car is moving toward the west.

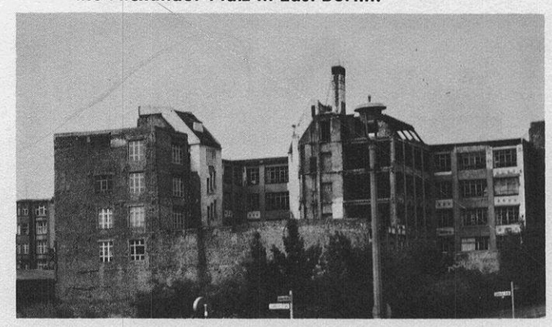
Rhine river. Traditionally one thinks then of the sugar-beet-wheat-rye-oats-potatoes contribution of the eastern areas. However, on the one hand, Western Germany has greatly increased its agricultural productivity compared with pre-World War II levels and on the other hand Eastern Germany, with its long history of specialized industrial products, via., optical goods, dyes, maps, etc., and its enormous reserves of low-grade coal, has moved ahead to occupy a position among the top ten industrial areas in the world today.

Too much notice has been taken about the rapid post-war resurgence of industrialization in the German Federal Republic in general, and the Ruhr in particular. However, the rate of growth for industry as a whole, as well as for the most important industrial types, was of the same order of magnitude in both the German Democratic Republic and the German Federal Republic during the 1950's. When indices of production are compared with indices of industrial employment, productivity increase in the German Democratic Republic slightly exceeds that in the Federal Republic. Between 1936 and 1955 the number of wage and salary earners in industry increased by three-fifths in the Federal Republic (up 2,700,000) and by one-fourth in the German Democratic Republic (up 700,000). Producer-goods industries in both divisions showed a much greater growth than consumer-goods industries. During this period, increases in employment in the German Democratic Republic's basic industries—energy, mining, metallurgy, chemicals, and construction materials—was particularly great, whereas in the Federal Republic increases in employment were well-marked in the metal processing industries.

By the mid-1950's the German Democratic Republic's percentage of the total production of both divisions of Germany had greatly increased in brown coal, brown coal briquettes, iron ore, lime and carbide, and window glass; it had decreased in motor fuels and aluminum. These increases were in line with the general policy of East European countries in attempting to cover an increasing share of metal requirements by domestic production.

The political significance of Berlin often shadows its economic importance to both Western and Eastern

View from the top of the Haus des Kindes down the Karl Marx Allee toward the reconstruction of the Alexander Platz in East Berlin.



Signs of destruction now over twenty years old along the Unter den Linden in East Berlin.

Modern and attractive shop of Dresden china along the Unter den Linden in East Berlin; like most stores this is state owned and operated.

Uninspiring post-war apartment dwellings in Potsdam. Much of this city of several hundred thousand people remains untouched by the modern turn in East Berlin.

Germany. West Berlin ranks seventh among the ten **Landern** of Western Germany in terms of industrial workers—one of the most respected criteria of industrial measure. Its 300,000 workers represent nearly 5% of Western Germany's industrial labor force; its 6,000 industrial establishments constitute 6% of all the factories; and its 6 billion D.M. sales are 3% of the total industrial sales of Western Germany. East Berlin, on the other hand, ranks seventh among the fifteen Bezirke in Eastern Germany. Its 200,000 workers form nearly 7% of Eastern Germany's industrial labor force; its 1,000 industrial establishments comprise 6% of all the factories; and its 4 billion D.M. (equivalent) gross industrial production represents 7% of all industrial productivity in Eastern Germany.

The two Germanys have, since the mid-1960's become increasingly valuable in terms of industrial and agricultural productivity, if they were a roadblock then to an east-west detente there is no doubt their increased value as producers of the world's goods now makes them even more valuable as pawns in the world's game of politics. Neither the United States of America nor the Soviet Union can now afford the loss of its sector of influence; nor can either afford the luxury of seeing the other gain by its loss.

Researching the Problem

The fall issue of **Canadian Slavic Studies** contained the results of my research on "A Regional Analysis of East German Industrialization in the 1950's". This lengthy inquiry into the economic geography of the German Democratic Republic (Communist East Germany) represents a wide variety of both librarial and field research techniques in this country and abroad. Initial interest in the German area was aroused as the result of a weekend visit to Berlin while I was on an extensive field reconnaissance of Europe in 1956. At that time a very brief trip into East Berlin drove home the vast economic as well as political gulfs which existed between capitalistic West Berlin and Communistic East Berlin.

Spurred on by the potentialities for a serious geographic study of the economy of East Berlin, I applied for and received a substantial grant from Ohio State University in 1958 to study the changes in economy along the border between West Berlin and East Berlin. Several weeks during that summer were spent "in the field" walking along **die Grenze** between East and West Berlin, taking notes, photographs, and interviewing people. At that time movement across the border was fairly simple—the **die Mauer** (the wall) was still three years away—and considerable insight was achieved without serious concern for life or limb.

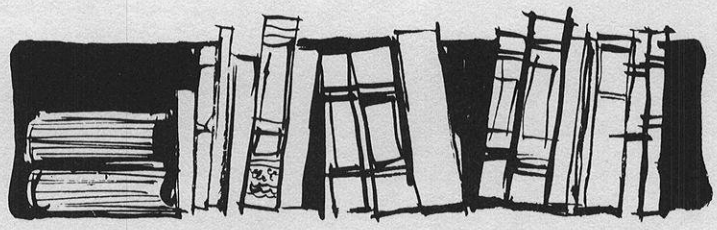
It was during this visit that the wonders of German bookstores first became apparent; their stock of sound geographic and economic reports and detailed maps made possible the broadening and deepening of the entire project. In East Berlin the **Statistisches Jahrbuch der Deutschen Demokratischen Republik,** an annual summary of economic statistics for East Germany, was purchased along with pamphlets dealing with specific developments in the subdivisions of the country. Acquaintances at the Freie Universitat, the university in West Berlin partially funded by the Ford Foundation, and established when conditions at the Humboldt University in East Berlin became intolerable for free inquiry, assisted me in finding published information in the "choice" bookstores in both Berlins.

As a result of this field and bookstore research, papers were presented before the Association of American Geographers and the National Council for Geographic Education and several short articles were published. One of these, "Notes on the Industrial Economy of West and East Berlin," appeared in **The Professional Geographer,** and emphasized the major contracts and similarities in the evolving economies of these areas. Another, **"Deutscher Planungsatlas: Atlas von Berlin,"** appeared in the same journal and brought to the attention of American geographers a startingly detailed atlas of a city in change.

Two years after my first serious stay in Berlin, ten other geographers and I traveled extensively through the Soviet Union, where bookstores again provided valuable material for my growing interest in East Berlin and East Germany. A Russian study of the whole of **Germany, Germaniia,** by M. M. Zhirmunskii, A. A. Zasukhin, L. B. Igritskaia, and N. P. Sktatser, published in Moscow in 1959 in Russian, provided statistical, cartographic, and verbal insights into East German economic developments which could be found easily in no other place. En route back to the United States, a new visit to East Berlin provided additional data as well as photographs. About this time a brief appointment as "visitor" at the Harvard Russian Center allowed maximum use of a rich library of Communist documents as well as seminars which provided access to specialists in various phases of the Communist picture. Atlases purchased abroad—in the Soviet Union, West Berlin, and East Berlin—provided the key to specific locations mentioned in written studies of East Germany.

Another grant, this time from the University of Wisconsin Center System, permitted my return to Berlin to update the study. This visit broadened the librarial aspect through visitation to the Ost-Europa Institute in Munich, a research organization with specialization in the satellite area of Eastern Europe and the Johann Gottfried Herder Institute in Marbury, which specializes in Poland, East Germany, Czechoslovakia, and the Baltic states. In both institutes the spirit of cooperation evidenced by the librarians made the continuing development of the study a very pleasurable experience.

A side effect of the entire project, now a decade old, is the request by **Canadian Slavic Studies** to provide them with an annotated bibliography of geographic material published in all of the East European countries at regular intervals during the year. Thus, the many items which ordinarily are dismissed because they do not have a direct bearing on the research paper can be utilized to aid other scholars interested in related topics dealing with East Europe.



A SAND COUNTY ALMANAC AND SKETCHES FROM HERE AND THERE, by **Aldo Leopold.** Oxford University Press, (paper) 226 pp. $1.75.

This book, which first appeared in 1949, is now available in one of the most handsome paperback editions ever. Leopold's writing is strong and epigramatic.

> The Lord giveth and the Lord taketh away, but He is no longer the only one to do so. When some remote ancestor of ours invented the shovel, he became a giver: he could plant a tree. And when the axe was invented, he became a taker: he could chop it down. Whoever owns land has thus assumed, whether he knows it or not, the divine functions of creating and destroying . . .

The fine prose quality is coupled with the excellent drawings of Charles Schwartz.

Aldo Leopold, who died in 1948 while fighting a grass fire in Wisconsin, was an internationally known wildlife expert and chairman of the Department of Wildlife Management at the University of Wisconsin. To implement his ideas he bought a run-down farm near Portage and restored it as a wildlife sanctuary. The book takes its name from the round-the-year account of Leopold's outdoor life and his observations. The essays which make up the volume were originally published in such obscure places as the **Journal of Forestry** and the **Wisconsin Agriculturist and Farmer.** They received a wider audience when collected and published in 1949. This audience should now continue to increase because here is a book that belongs on every Wisconsin bookshelf.

—Prof. Walter F. Peterson,
Lawrence University

RISE OF THE AMERICAN NATION by **Lewis Paul Todd** and **Merle Curti.** Harcourt, Brace & World, Inc., New York 1968. Volume I, 691 pp., Volume II, 816 pp. $4.95 each.

The team of Todd and Curti represents both distinction and balance. Merle Curti (A54) is one of the most distinguished professors of American history, having won the Pulitzer Prize in 1943 and having served as president of the American Historical Association, the highest honors a historian in the United States can receive. Lewis Todd is widely known among social studies teachers as a former editor of SOCIAL EDUCATION, the official journal of the National Council on Social Studies. Curti and Todd began their collaboration on publications for use in high school American history classrooms during the period 1937-1942 when Curti was at Teachers College, Columbia University. The original copyright on **The Rise of the American Nation** is 1950. It has been consistently revised, most recently in the 1968 edition.

As you glance through the two volumes you are struck by the excellent illustrations, the fine charts, and the fact that the maps are outstanding in terms of their clarity. In fact, clarity is a word which can be applied to the volume as a whole. A fine literary style runs throughout the volumes. This text has an intellectual stature and quality which puts it beyond other texts.

A closer examination reveals history handled in an imaginative fashion. As a case in point, the Constitution is not tacked on at the end of a separate section at the end of the volume as is often the case but rather the entire document, together with a historical explanation and interpretation, is included at that chronological point in time when the founding fathers drew up this fundamental statement.

This is a fine general text. In fact, it is probably the best of the general texts. For those high school teachers who work from the original sources this is an excellent reference work and each classroom should have a substantial number on the shelves.

—Prof. Walter F. Peterson,
Lawrence University

HONEY TO BE SAVORED by Marian Paust. Naylor Co., San Antonio, Texas. 1968. (Also available from the author, Double M Ranch, Route #4, Richland Center, Wis.) ($3.95).

The wealth of talent lodged in the mind and heart of prize-winning Marian Paust (A56) is evidenced again in her newest book. With widely varied publications shown in her acknowledgments—that include the P.E.O. **Record** and **American Lyricist**—she has served a range of highly reputable publications indeed. The National Federation of State Poetry Societies called on her to act as Chairman in its poetry contest recently and she has been elected a member of the National League of American Penwomen. This most recent of her publishers lists Mrs. Paust's appearance in **Who's Who** and in **Who's Who in American Women.**

The Dedication of **Honey To Be Savored** (the title also of the very last poem in this inspiring volume) reads "To Martin". It is richly significant that Mr. and Mrs. Paust, on her home land are partners, of far-spread repute in raising, training, and marketing registered Arabian horses:

> "Here I was born,
> and here the whip-poor-wills
> And I shared stars and
> silver nights as one."

(Continued on page 16)

ACADEMY NEWS

People and Places

Prof. **CHARLES F. EDSON** (A60) (UW, History) especially noted for his research on Macedonia, read an invited paper and represented Wisconsin at a conference on Ancient Macedonia which was held at Thessaloniki, Greece, during the last week of August.

Prof. **FANNIE T. TAYLOR** (S65) attended the sessions of the International Music Council in New York and Washington during the second week of September. Mrs. Taylor is the coordinator of the UW Arts Council.

Prof. **AARON J. IHDE** (A45) (UW, Chemistry) received the 1968 Dexter Award from the American Chemical Society for distinguished work in the history of chemistry. The award is sponsored by the Dexter Chemical Co. of New York City and was presented at the annual ACS meeting in Atlantic City in September.

WILLIAM A. SCHMIDTKE (A68) formerly director of student affairs at UWGB-Marinette Campus has been appointed UWGB director of Summer Session and January Special Studies.

Several Academy members are serving as officials of the various Wisconsin Chapters of the American Association of University Professors: Prof. **HARRIET M. SWEETLAND** (A56) (UWM, English) is vice-president of the UWM Chapter; Prof. **JAMES H. SHEA** (A61) (UWP, Geology) is president of the UW-Parkside Chapter; and Prof. **LEANDER J. SCHWARTZ** (A64) (UWGB-Fox Valley Campus, Botany) is president of the UWGB-Fox Valley unit.

Prof. **KENNETH W. KORB** (A68) UCS-Sheboygan Co. Campus, Geography) is serving as assistant dean for academic affairs of the Sheboygan Campus.

Prof. **FREDERICK M. LOGAN** (A55) (UW, Art) is acting as chief of party for the Northern Nigeria Teacher Education Project.

Prof. **ROBERT TAYLOR** (A56) (UW, Journalism), who has served as assistant to three UW presidents since he joined the faculty 20 years ago, was named vice president by the UW Board of Regents at their meeting on October 4.

Professors **ERWIN N. HIEBERT** (A59) and **ROBERT SIEGFRIED** (A65) (UW, History of Science) attended the 12th International Congress of the History of Science in Paris last September.

Prof. **GERARD A. ROHLICH** (A49) (UW, Water Res. Center) was nominated by the Wisconsin Section of the American Water Works Association for the Fuller Award in recognition of his advancement of the water supply industry.

Mr. **EDWARD J. PETUCH** (AS67) (Brookfield), a UW-Waukesha Campus student studying to be a marine biologist, was one of the 10 Wisconsin representatives to the Cultural Olympics in Mexico City in October. He was selected for his over-all accomplishments as a musician, composer, artist, linguist and scientist. Petuch presented a paper at the Statewide Meeting of the Junior Academy at WSU-O in 1967 and was elected an Honorary Student Member of the Academy.

Emer. Prof. **M. STARR NICHOLS** (A61) (UW, Civil Engineering) was recently elected a Fellow of the Royal Society of Health of Great Britain.

Prof. **JAMES W. BUSCH** (A61) (UW, Education) has been appointed to serve on the Issues Committee of the National Science Teachers Association for 1968-69.

Academy President **ADOLPH A. SUPPAN** (A57) (UWM, Fine Arts) was elected Chairman of the International Council of Fine Arts Deans at their annual conference held in Boston in October. Dean Suppan is also serving on the Executive Committee of the University of Wisconsin Arts Council for 1968-69. Prof. **JAMES A. SCHINNELLER** (A63) (UW Ext., Art) is also a member of the Council.

Emer. Dean **MARK H. INGRAHAM** (A29) (UW, Retirement Office) is co-author of the recently appearing UW Press book **The Mirror of Brass: The Compensation and Working Conditions of College and University Administrators.**

UWM Chancellor **J. MARTIN KLOTSCHE** (56) was awarded the Commander's Cross of the Federal Order of Merit from the Federal Republic of Germany in recognition of his work with Goethe House in Milwaukee.

ROY J. LUKES (A65) (Bailey's Harbor), president of the Ridges Wildflower Sanctuary of Door County, spoke at the annual meeting of the Friends of the Arboretum held in Madison December 3.

Prof. **JAMES E. WALSH** (A66) (UCS-West Bend Campus, Botany) was elected to membership on the Center System Faculty Senate Curriculum Coordination and Policy Committee.

Two new University Press books appeared recently authored by Academy members: Peregrine **Falcon Populations: Their Biology and Decline** by Prof. **JOSEPH J. HICKEY** (A48) (UW, Wildlife Ecology); and **Camus: A Bibliography** by Prof. **ROBERT F. ROEMING** (A57) (UWM, French and Italian).

Prof. **DUARD L. WALKER** (A64) (UW, Medicine) spoke at a special research conference in Atlanta, Georgia, on December 9-10. He discussed latent virus infections and their relationship to human diseases, including rheumatic disease.

Prof. **AARON J. IHDE** (A45) (UW Chemistry) received the 1968 Dexter Award for distinguished work in the history of chemistry at the American Chemical Society meeting in Atlantic City, N.J.

MARIAN PAUST (Mrs. Martin) (A56) received a fine write-up in the Wisconsin State Journal, October 13, 1968 by Louise Marston. Miss Marston writes that Mrs. Paust "has the soul of a poet and the common sense of a small town banker. Everything about this pleasant white-haired woman emphasizes these contradictory facets of her personality.

"She and her genial husband, Martin Paust, president of the Richland County Bank, live in a charming new home in a setting of picture postcard beauty, but she stresses that 'It's definitely a working farm . . .'

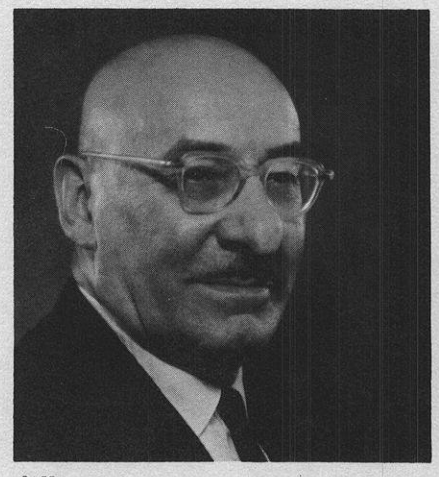
"The home and the spectacularly beautiful countryside surrounding it have obviously provided the inspiration for much of the poetry in Mrs. Paust's volume of verse, **Honey to be Savored**, which has just been published by the Naylor Co., San Antonio, Tex.

"The poetry reveals Mrs. Paust's close affinity with the valleys, ridges, running streams, trees, and paths of her rural home—plus her complete devotion to the pure-bred Arabian horses which she has raised in recent years."

A review of Mrs. Paust's book appears in the Book Review section of this issue.

Retirements

Prof. **SERGIUS A. WILDE** (A44) retired as professor of soils from the University of Wisconsin last July. Coming to the United States in 1929, he worked as field assistant with the Lake States Forest Experiment Station in Minnesota and the Wisconsin Geological and Natural History Survey. He was appointed assistant professor of soils at the University of Wisconsin in 1934 and



full professor in 1946. His former students are today providing much of the leadership in forest soils research and teaching in many parts of the world.

Born in Moscow, Prof. Wilde attended the Real Schule there and continued his studies at the Technical University of Prague. There he received the forest engineer degree, summa cum laude, and the degree of Doctor of Technical Sciences. He taught at the Forest Engineering College of Prague and helped in evaluation of the forest lands of Czechoslovakia.

More than 50 years ago he served his native Russia in World War I as staff captain with the Horse Artillery. Twice wounded in battle, he was granted three promotions and decorated with the Russian order of St. George.

—G.M.S.

In Memoriam

ERNEST F. SWIFT, national leader in conservation and former director of the Wisconsin Conservation Department died in Rice Lake, Wisconsin on July 24, 1968. He was a long-time Academy member prior to his illness.

WEATHER-WISE

I hear the plaint of those who walk
A quarter-hour along the street,
Be-moaning cold and storm that balk
Complacency. Hard-driven sleet
And drifted curb seem cruel, harsh
To those who never sensed the raw
Hostility of wind-blown marsh,
Or blank, snow-hidden trail—a Law
The Great White Cold imposed to block
The potency of man and team
And, seemingly, designed to mock
Each ill-advised though valiant scheme.
I hear the jibes that grumblers fling;
Appraise, then smile . . . remembering.

Dana Kneeland Akers
Superior, Wisconsin

BOOK REVIEWS

(Continued from page 13)

HONEY . . .

In "Hill Fever", a 16-line sonnet (a form in which she especially excels), Mrs. Paust intrigues the attention at once, perhaps in part because of Masefield's **Sea Fever:**

"To climb, once more,
each stony path to crest,
Pick apple blossoms,
drink from icy springs . . . "

This Wisconsin poet knows her technique as well as her sources of inspiration. Concrete specific examples and sense-appeals—surest aids to communication—are "here in God's plenty" throughout the book.

Much more cries out for mention—but only a final word. These poems are devout. The author is simple, sincere, and repeatedly "dependent on the promises of God."

The format is tasteful, in keeping with the spirit of **Honey To Be Savored.**

—Ralph Alan McCanse

ESSENTIALS OF FORESTRY PRACTICE by **Charles H. Stoddard.** Second Ed. The Ronald Press Co., N.Y. 1968. $7.00

This basic practical book covers forest planning and field practices for timber growing, logging, protection, harvesting, and processing, as well as current and long-term planning for the use of forest lands for conservation and recreation.

New methods are featured on forest inventorying and mapping; processing of forestry data; logging and machinery; and advanced techniques for fire protection. Detailed information on Christmas-tree growing, tree farm management, and new forest products is included. A wealth of practical procedures, management plans and forms, and sources of more detailed information is provided.

Charles H. Stoddard (A56) is Regional Coordinator in the Upper Mississippi-Western Great Lakes Area for the U.S. Department of the Interior. He has also served with the Bureau of Land Management, U.S. Forest Service, Resources for the Future, Inc., and as a private consultant.

New Members

June 5-December 6, 1968

Institutional

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Active

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Marinette, Wis. 54143

Miss Irene I. Luethge
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Kiel, Wis. 53042

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Green Bay, Wis. 54302

Mr. Herbert J. Sprengel
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Wauwatosa, Wis. 53226

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Athens, Ohio 45701

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Mequon, Wis. 53092

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Wauwatosa, Wis. 53213

Mr. Norman A. Gatford
2702 N. Stowell Ave.
Milwaukee, Wis. 53211

Student

Mr. Lawrence G. Krause
4628 N. 76th St.
Milwaukee, Wis. 53218

Mrs. Paula A. Piehl
4100 N. Prospect
Shorewood, Wis. 53211

Mr. John McLean Rohr
4115 N. Bartlett
Shorewood, Wis. 53211

Miss Donna Frances Ruiz
1139 A E. Meinecke Ave.
Milwaukee, Wis. 53212

Library

Library, Science & Engineering
SUNY Bldg 6
Buffalo, N. Y. 14214

Library, Carlson
Clarion State College
Clarion, Pa. 16214

Library, Univ. of Detroit (Lib 59)
4001 W. McNichols
Detroit, Mich. 48221

Library, UW Center
400 University Dr.
West Bend, Wis. 53095

Library, UW Center
Box 320 1006 Connie Rd.
Baraboo, Wis. 53913

T. B. Scott Public Library
540 Third Street S.
Wisconsin Rapids, Wis. 54494

Library, Barron County Campus
Stout State University
Rice Lake, Wis. 54868

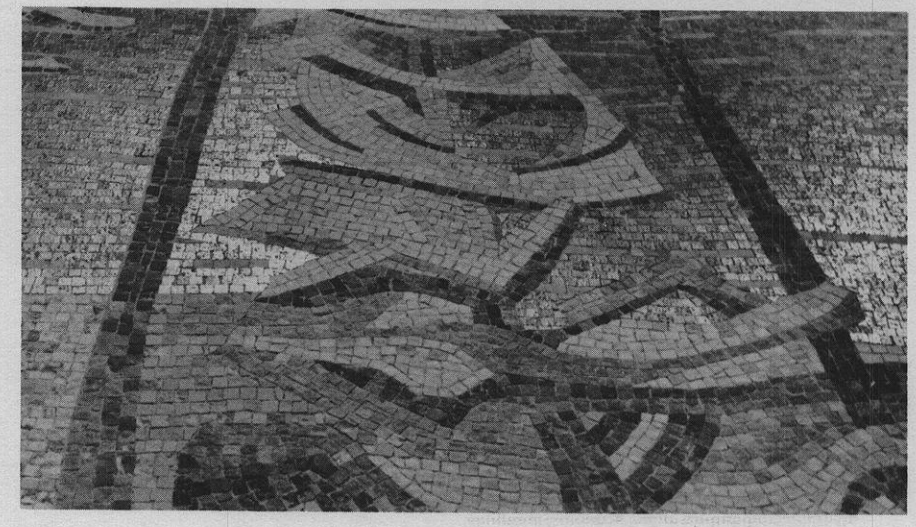
University Library
New Mexico State University
Las Cruces, New Mexico 88001

Cover Profile

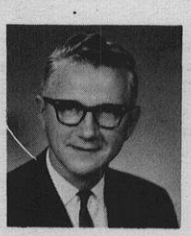
Like the mosaic murals featured in the Fall Review—"Liberty" and "Government" in the State Capitol at Madison—those pictured in the current issue ornament a public building—in this case, the District State Office Building in Milwaukee's Civic Center. They are the work of Professor Marjorie Kreilick of the Department of Art and Art Education, University of Wisconsin, Madison and were produced during an eighteen-month period in 1961-63 when she held a Prix de Rome Fellowship at the American Academy of Art in Rome.

Commissioned through the structure's designers, Grellinger and Rose, Inc. of Milwaukee, and former state architect Karel Yasko, the mosaics number ten in all—one in each of nine elevator lobbies and a larger mural in the main entrance vestibule. The latter symbolizes the State Motto "Forward," while the former represent various aspects of Wisconsins's landscape before the advent of white settlers. Our cover mural, for example, located on the eighth floor, depicts birches in a river grove. Others portray a swamp, sand dunes, a meadow, an evergreen forest, and the like. All are semi-abstract, subtly-hued designs executed in natural marble and gold tesserae. All are illuminated by both natural and artificial light and are given great vitality not only by forms and texture but also by their irregular surfaces and golden tesserae, which catch and reflect the light in ever-changing patterns.

Photographs by Mary Ellen Pagel, UW Center System, and Clarence Kailin, Department of Photography, University of Wisconsin, Madison.



About the Authors



ARTHUR E. PETERSON (A56) is Professor of Soil Science, University of Wisconsin. After completing undergraduate and graduate work at the University, he joined the Soils Department and has been doing research, teaching, and extension in Soil and Water Conservation since then.

He had a two year leave from the University to join the Rockefeller and Ford Foundations as Chief Resident Consultant to the Cooperative Maise Improvement program in Egypt during 1966 and 1967. His stay was cut short by the six-day war, and he returned to Madison on September 1, 1967 after spending July and August in Thailand working for the Rockefeller Foundation.

Dr. Peterson's research had generally dealt with problems relating to water movement in the soil, and tillage and cultural practices that will influence both the water and soil movement.

JACK R. VILLMOW (A67) is now Professor of Geography at Northern Illinois University in DeKalb, Ill. He did his undergraduate and graduate work at the University of Wisconsin, and has taught at Wellesley College, Ohio State University and the University of Wisconsin, and has been a visiting lecturer at Boston University and Clark University.

Dr. Villmow has published widely in Canadian and American journals on weather and physical geography, and in foreign journals published in Eastern Europe on geographic topics.

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