

Early Years
Paul Weatherwax

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[In cleaning out Dr. Weatherwax's office after his death I came across a manuscript, an autobiography. As I read through it, however, I realized that certain parts were missing. I thought that perhaps he had never completed it but when calling his son, Charles, to inform him of my discovery, I learned that he had found the missing parts in Dr. Weatherwax's home. Because of his many contributions to science education in the state of Indiana and his interest in the Indiana Academy of Science—he was a member for 63 years,* it seems most fitting that his autobiography be published in the pages of these Proceedings. The first chapter is presented here and it is hoped that others will follow in subsequent volumes. By way of introduction I include a brief sketch of his life.

Paul Weatherwax was born near Worthington, Indiana, on April 4, 1888. He grew up on a farm and received his early education in one room schoolhouses. Following graduation from high school at Worthington in 1907, he returned to one room schoolhouses near Worthington to teach for two years. His first college courses were taken at Wabash College in the spring term of 1909 and at DePauw University in the 1910 summer session. During the years 1910 and 1911 he taught high school, first at Owensburg and then at Freedom where he served as principal as well as teacher of most of the courses. *Freedom*, he has written, was a good name for the town but *Licenses* would have been better, for he had difficulty in stimulating any interest in orderly behavior or things intellectual. He enrolled at Indiana University in the spring of 1911, but he had to return to teaching at Greencastle for a year in order to secure funds to continue his education at the university. He received the bachelor's degree in 1914, the master's in 1915, and the doctorate in 1918. In the summer of 1913 he was part of a party employed by the Indiana State Board of Health to survey pollution in Indiana streams, and thus he early became aware of problems that only more recently have become of general concern to the ecologist. From 1913 to 1915 he served as an assistant in botany at Indiana University, and in 1915 he became an instructor in botany serving in that position until 1918. Prospects for continuing at Indiana University were not bright at that time so in 1919 he accepted a position as Associate Professor at the University of Georgia. In 1921 he eagerly accepted the invitation to return to Indiana University, and he was to spend the next 37 years teaching for that university. In 1957 he joined the group from Indiana University in the United States Operations Mission in Thailand where he was primarily concerned with training teachers of biology. Although he was made Emeritus Professor in 1959, this did not bring an end to his teaching, for in 1960 he was invited to serve as a visiting professor at Franklin College where he taught for three years. In 1963 Franklin College awarded him an honorary doctorate of science. His last formal teaching was done at Hanover College in 1966; but in the remaining days of his life, his office at Indiana University was always open to students who wished to consult with him.

*See Proc. Ind. Acad. 86: 63-65. 1977. for his many contributions to the Society.

Dr. Weatherwax's teaching career spanned 50 years, and he will be remembered foremost as a teacher, as he would want to be. He received his greatest pleasure from teaching the elementary botany course; and at a time when many professors felt that the elementary courses should be relegated to the junior faculty members, by choice he continued teaching this course until his retirement. He took delight in having children of his former students enroll in his course, as frequently happened. His interest in teaching of elementary students led to the writing of a textbook, *Plant Biology*, the title of which was changed to *Botany* in the third edition, the one that he had preferred all along. He also taught his share of advanced courses. One of the most popular of these was a seminar in the morphology of grasses, given at the request of graduate students. His intimate knowledge of the grass family combined with his teaching ability made it possible to make this most difficult family intelligible. Perhaps the course most fondly remembered by his students was the summer field trip to Florida, a course that he introduced to acquaint them with tropical botany.

As great as was his dedication to teaching, he never neglected research. Beginning his research as an undergraduate he continued with it until long after his formal retirement. His first scientific papers were published in 1914. Dr. Weatherwax was a most versatile botanist, but for his field of specialization he chose morphology, particularly the morphology of grasses, and no grass was to be of greater concern to him than was the corn plant. His doctoral dissertation was entitled *The Evolution of Maize*, and in 1923 his first book, *The Story of the Maize Plant*, appeared. As others have pointed out, it was his early interpretation of the structure of the corn plant in relation to other grasses that was to set the stage for the understanding of the origin of the corn plant. He was concerned not only with the morphology of the plant but with many other aspects as well, particularly its origin and history, which culminated in his *Indian Corn in Old America* published in 1954. His travels in connection with his research took him to the southeastern and southwestern United States and to many parts of Latin America. His studies were aided by a Waterman fellowship from 1925 to 1930 and a Guggenheim traveling fellowship in 1944. He was also a noted botanical illustrator, and he became widely recognized for the illustrations he made for C. C. Deam's *Grasses of Indiana* in 1929.

Dr. Weatherwax was a member of a number of societies, and he was particularly active in the affairs of the Botanical Society of America and the Indiana Academy of Science. He served as president of the latter society in 1941. He was secretary of the Botanical Society from 1939 to 1943 and was elected vice president both in 1944 and 1957. In 1976 he received a Certificate of Merit from the society in recognition of his distinguished achievement and contributions to the advancement of botanical science.

Paul Weatherwax died on October 18, 1976 in Bloomington.

Charles B. Heiser, Indiana University]

PREFACE

Anyone who has taken an active part in the stirring events of the past fourscore years and more ought to have made some observations and accumulated some memories worth recording for whatever use the future may make of them. It is a common human failing not to recognize history when it is being made. No time is so little understood and appreciated as the present and no place so little ap-

preciated as the place where we now live. Only from the perspective of time and space do we properly value the here and the now.

In our attempts to reconstruct pictures of the past, especially those of local interest, every fragment of information recorded by an observer on the spot is precious. Letters, diaries, family records, obituaries, epitaphs, and newspaper items all make their contributions. Even when some of these prove to be erroneous, they all have their unique importance when properly evaluated.

It is, then, with a feeling of this implied responsibility—and at the strong insistence of relatives and friends—that I undertake the task of placing on record some of the things that I remember, for whatever use posterity may make of them. If some of my pioneer ancestors in southern Indiana had done as much, their records would have been of inestimable value today.

If we may disregard a brief attempt in my high school days, I have never kept what might be called a diary. In that one venture I decided to write in Latin, to make use of an embryonic accomplishment and to protect myself from anyone who might be looking over my shoulder; but I soon found the effort too great to make the project interesting and my limited knowledge of the idiom of that language a serious handicap. Fortunately, no fragment of that effort has been preserved.

In later years, when I was privileged to travel extensively in the United States and some other countries in a professional capacity, I did keep notes on my observations—some of them in no way connected with my research. These notes have been preserved and will be used. Copies of an extensive correspondence will provide further on-site data. But the main body of what I shall write will come from unrecorded memories, and I am fully aware of the fickle nature of memory. One comforting thought makes compensation for that defect. It is the time-honored maxim that memory of events of long ago is usually more clear than that of what happened yesterday.

I

My earliest recollections go back to the time when I was between three and four years old. We then lived about two miles northwest of Worthington on what was commonly spoken of as the Phegley place. I have no idea who the Phegleys were, how we happened to be living there, or even whether I have spelled the name correctly. Although this was more than 80 years ago, a few incidents still stand out more vividly than some events of only a few months ago.

My birthplace was a short distance east of there at what was known as the Andrews place. This location has been occupied since then by different families, especially the John Stahl family for several years.

A boy some six or seven years old lived nearby, probably one of the Loffland boys sometimes came over to play with me. I found him interesting because he introduced me to some new experiences. I recall his showing me how to model animals and other objects from clay, and I remember that there was one small spot in the yard where the clay was especially good for our purpose. This was geology lesson No. 1. Near the house there was a small grove of sassafras trees, some of them bearing fruits, and he showed me how to break away the drupe and eat the fleshy, red, spicy-flavored pedicel. This was botany lesson No. 1. During that summer (1891) a group of Gypsies camped for a few weeks along the creek near our house, and we visited their camp on one or more occasions. I remember their gaily colored tents and horse-drawn vehicles and sensed to a degree the vast difference between their way of living and ours.

While we lived there I had an accident, a part of the result of which is still with me. Running from one room to another one day I fell and struck my forehead against the sharp corner of the door casing, or possibly against a broken hinge. The ugly cut over my right eye healed in due time, without the aid of a doctor, but the injury must have been more than skin deep for there is still a knot there on my skull.

One more thing I remember vividly from those days. I ate my meals from a small plate which was decorated around the edge with the capital letters of the alphabet. I had some idea of how these letters went together to make words on the printed page, and I felt a strong desire to learn to read. Years later Mother used to tell how they had difficulty in getting me to move along on the sidewalks in town because I was always stopping to spell out the signs on the stores.

In the spring of 1892 we moved to a farm owed by Mother's Uncle Frank Maxwell, located along the Evansville and Terre Haute railroad and the towpath of the old Wabash and Erie canal, about two miles south of Worthington. By some mutal but unwritten agreement, March 1 was moving day, on which the tenant farmers of a neighborhood played a game of musical chairs and moved to their new locations. That year, as usual, March 1 was a raw, chilly day, and we found most welcome the fire left burning in the fireplace by the previous tenants.

The Maxwell family had moved to Iowa some time before that but were now planning to come back to Indiana. As the first step toward that move the son John came back to Indiana that spring to begin farm operations. He took his meals with us, but if I remember correctly, he slept in the barn. He was a rough, irresponsible youngster, and he found much to criticize in my department. I have few pleasant memories of my relations with him during that spring and summer. In spite of his unpleasant manner he later became some sort of preacher.

Another member of the Maxwell family, Uncle Frank's sister, also lived with us a part of that year. I don't know what her actual name was, but we always knew her as Aunt Setty. She was one of those peculiar half-wits, decidedly off the beam in some ways, but very kind and as sharp as a tack in many ways. I am not sure just how we managed to accommodate both of these visitors in a house which, as I remember it, had only two rooms.

Another trivial incident was worth recording. Among the things that John Maxwell had brought with him was a peck or so of navy beans which had been grown in Iowa, and to sister Winifred and me was often assigned the task of "looking" the beans in preparation for cooking them. That is, we would pour a small number of beans from hand to hand and pick out damaged ones or bits of foreign material. The principal adulterant consisted of bits of black soil, and I recall with what interest I accumulated these little clods of "Iowa dirt" as something special. They seemed to be a symbol of some far-away place which appealed to my imagination. Possibly they were symbolic precursors of the wanderlust that I was to experience in later years.

In 1892 the country was in the midst of one of the periodic economic depressions, and there was a general complaint of hard times. One characteristic aspect of this condition was the appearance of large numbers of hoboes, tramps we called them, who roamed about the country begging for a living. Many of them traveled by railroad, bumming an occasional ride on a freight train, but hitting the ties most of the time. Since we lived near the railroad we had our share of such visitors. There was a common belief that they had a system of marking gates or fences with symbols informing other members of the fraternity as to what sort of welcome they

would receive at various houses. I don't know how they had us labeled, and we were not particularly generous toward them, but we had our share of such guests. Most of them were simple-minded, harmless fellows, but enough tales were in circulation about the evil doings of some of them when they found the welcome mat upside down to engender a word of warning us about dealing with them. We youngsters had a feeling that a tramp would get is if we didn't watch out.

Dad sometimes told in later years of taking me squirrel hunting while we lived there. But I found something far more interesting than squirrels in the form of some tall weeds with enlarged knots in their stems. I do not remember whether we got any squirrels, but I did come home with an armful of what I later learned were goldenrod stems bearing insect galls. This was another botany lesson, even if I did not understand it.

Another fascinating lesson in the same science was provided by a moss rose bush which grew at one end of the house. I found the fuzzy twigs and flower buds most interesting. Also, under this rose bush there was a small patch of moss, some of the plants of which were adorned with what I later learned were sporophytes. At the time I had no knowledge of the life histories of such plants, but I did have some vague hunch that these ornamentations were to the moss something equivalent to the flowers of other plants.

Since the Maxwells were to return to Indiana and the farm would no longer be available, Dad had arranged during the summer to rent another farm about a mile farther south. He had stored hay there and in early fall had sown a field of winter barley. But, for some reason that I never knew, the deal folded up in the late fall, and we had no place to go at moving time the following spring. What to do was the big question. As a part of the answer, Grandfather Newsom deeded to Mother 59 acres of the old homestead about three and half miles north of Worthington. There was no house there, and although the beginning of winter was near, Dad and Mother decided to build one. There had apparently been a cash settlement of some kind in connection with the cancellation of the rental arrangement, since otherwise they would have had no resources for building.

During most of the winter Dad drove back and forth in the wagon each day to help in the construction. Uncle Leonard did most of the carpenter work.

At moving time in the spring the house was not yet finished, but the work was far enough along for us to move in. Mother, Winifred, Mary, and I went along with the last load of our possessions, including a coop of chickens. This was in the spring of 1893, and this house was to be our home for the next 35 years.

II

Our move to the new house on the farm north of Worthington in the spring of 1893 marked the end of our annual migrations as a part of the tenant farmer system. In this more stable environment we children spent our formative years as we grew up and, in time, left home to strike out on our own.

The farm was a part of a tract of land which my great grandfather James Newsom had acquired when the family moved to Indiana from Stokes County, North Carolina, in the early 1800's. The country was then still sparsely settled and undeveloped. A family tradition, which I heard repeated many times, told of their having seen a bear eating the offal left from butchering some time after their home was established there.

The house occupied by the Newsom family at that early date was about half a mile west of where our new home was established nearly a century later. It had also been the first home of Dad and Mother after Grandfather Newsom's family moved to the site nearer Worthington, and Winifred was born there. The old house had disappeared before I knew the locality, but the spot was marked by a few rose bushes and some plum trees. Two old barns also remained there for many years.

At the south edge of our farm was a site once occupied by the Harvey family, who were in some way related to the Newsoms. All that was left to mark the spot when we moved there was an old well and the remains of an orchard. Some of the trees were still in good condition, and in the fall of our first year there we harvested several bushels of good apples. I recall my sense of satisfaction that we had apples from our very own trees. Before that we had had apples only through the generosity of neighbors.

Only about half of our 59 acres was suitable for cultivation. An open woodland of mostly sugar maple trees occupied about ten acres, and for four or five years we tapped the trees and made maple syrup in early spring. Much of the land was rough and so worn out by cultivation and erosion that it was suitable only for pasture. Two or three springs supplied plenty of water for livestock.

In the neighborhood there was an acrimonious controversy about the merits of commercial fertilizers, and those who opposed them stuck pretty close to a rotation of corn, oats, and clover, or a mixture of clover and timothy. Dad leaned toward the conservative side and rarely used commercial fertilizer. This option was prompted by the lack of ready cash as much as anything. From the meager supply of farm literature that we had, and some school subjects, I learned of the increasing use of soy beans as a sure crop and soil builder, but I never succeeded in persuading him to try them even on a small scale. I think the cash outlay required for seed was as important in determining his attitude as was his aversion to a gamble with a new crop. For several years he rented, as a share cropper, about 10 or 12 acres along Eel River, which belonged to Grandfather Newsom, but in about one year in every three or four there was a crop failure because of spring or summer floods. The rental of a small tract of the Yancey farm, along Lick Creek, for a few seasons was subject to the same hazard, but on some occasions when the corn crop was damaged or destroyed by summer floods, a part of the investment was salvaged by a bumper crop of fall turnips. As one by-product of these lowland ventures in farming, I became proficient in fishing in the streams.

In 1893 there were not many improved roads anywhere, and the one on which our house was located was only a mud trail, dusty in summer and almost impassable in winter. But relief of a sort came when this road was included in an extensive project of gravel road building near the end of the century.

Architecturally the new house would not have taken any prizes, but it was typical of the times and better than anything we had had before that. It was constructed on apparently the only plan that Uncle Leonard had for building houses, and the work was done without benefit of blueprints or even written specifications. The house consisted of only three rooms—two square ones in front, which were used as a living room and bedroom—and, at the rear, a long room extending the full width of the building. This room served as kitchen and dining room, and one end of it as my bedroom. Years later it was divided into two rooms, and another room and a porch were added at the front.

No houses in the country, and only a few in towns the size of Worthington, had any sort of plumbing. At first our limited water supply came from a cistern filled in

the winter with rain water from the roof of the house. A well near the barn supplied water for the livestock, and later a well was dug near the ouse; but the water was so charged with minerals that it had only limited use. Bathing facilities were almost nil, and the other functions of a bathroom were provided by a little outhouse at some compromise distance from the back door. In fact, there was a feeling on the part of many in those days that the outhouse was much more sanitary — even more civilized — than the indoor facility with all its comfort and convenience.

At the back of the house we had a little building, one room of which served as a smokehouse for curing meat in winter and another which was used as a summer kitchen. The latter was more open and airy, and a bit cooler, than the indoor kitchen in summer. One serious defect in the system was the lack of adequate protection from flies. The house was screened, but there was no such provision for the summer kitchen; and the nearness of breeding places produced swarms of flies in summer. Sprays of various kinds and sticky fly paper were used with some success, but no attention was given to eliminating the breeding places although the life history of the insect was pretty well known.

The house was heated with stoves. In the spring the heating stove in the living room was taken down and stored in a closet, and the kitchen stove was moved to the summer kitchen; and in the fall this process was reversed. Just when to make these moves was always a matter of grave consideration, and I recall the shivering discomfort that I often experienced when the spring move was made too early, or even on chilly days in summer. In time we acquired a second cookstove, which was left permanently in the summer kitchen, and the one in the house provided a degree of relief for any unpleasantly cool days in summer.

Electricity as a household convenience was still in its infancy in the early years of the twentieth century, and rural electrification was still in a future of which no one even dreamed. Our only source of light was kerosene lamps — coal oil lights as they were more commonly known. Even during my high school days all my home work was done at the kitchen table by the light of one of these lamps. A well kept kerosene lamp was, however, not the grimy, smoky gadget that is often mentioned in modern times. With a clean chimney and a properly shaped wick it could provide a good light.

In those days no farm home had anything approaching modern refrigeration. A very few had ice houses in which ice harvested from ponds or streams in winter was packed in sawdust and stored for use in simple ice boxes in summer. We did not even have that facility. Our house had no cellar, but we improvised a suitable substitute. A pit dug in the back yard, walled with stone and covered over with heavy lumber and a layer of soil, provided a place where eggs, dairy products, and cooked foods could be kept cool and preserved for a few days. For somewhat cooler storage, food was sometimes placed in a suitable container and suspended in the well, just above the water level. In spite of these primitive makeshifts, there were remarkably few cases of illness which could be attributed to food poisoning.

Since trips to town were inconvenient and time-consuming, they were usually limited to Friday or Saturday of each week. On these occasions the butter, eggs, or other farm products were sold, and the next week's supply of staple groceries was laid in. If, through oversight, some needed items were not included, we simply did without until the next week. On these weekly trips to town the mail was picked up at the post office. Daily rural mail delivery came with better roads in the early 1900's.

Relief from this weekly schedule of shopping was sometimes provided by

huckster wagons which toured the country roads as an adjunct to the services of some of the better general stores. These agencies did amazingly well in supplying staple groceries, dry goods, kitchen utensils, etc., and often took orders for delivery the following week of items which they did not regularly carry in stock. They usually had provisions for taking butter, eggs, and even live chickens in exchange for their wares.

In the early years of our life on the farm a special type of huckster often made weekly deliveries of kerosene for lamps and stoves. He was commonly known as Coal Oil Johnny. He also sometimes made deliveries of gasoline for use in gasoline stoves which were sometimes used for cooking in summer. The price of gasoline was usually about ten cents per gallon since it was a comparatively useless by-product of kerosene refining. The advent of thirsty automobiles ultimately put an end to this fuel bargain.

Judged by today's standards we were scarcely above the poverty level. We were well acquainted with the simple philosophy of "Make it do; use it up; wear it out." Several families in the neighborhood were much less affluent, and a few were better off economically. But very few of either group had children who graduated from high school or attended college.

Our clothing was selected for service rather than for style, but we were always neat, clean, and presentable. There was no stigma attached to wearing hand-me-downs, and when a garment had reached the end of its usefulness, it was cut into long, narrow strips, and these were sewed together and sent to the neighborhood weavers to be made into carpet.

Most of our food was produced on the farm, and under conditions which would meet the approval of the most evangelistic "organic" food faddists of today. This was simply the most convenient and least expensive way of securing food. Fruits and vegetables were canned or dried for winter use. Gallons of sauerkraut, prepared in the fall, provided an important ingredient in a balanced diet, although we had never heard of vitamins. Corn was made into lye hominy or taken to the mill and ground into meal, with the miller taking a toll of about one tenth of the meal. Our meat was mostly pork or chicken, with an occasional supplement of mutton. Since there was no efficient refrigeration, fresh meat could not be kept very long except in winter. Butchering of hogs was delayed until early winter, and most of the pork was heavily salted and smoked for preservation. Some of it was made into sausage and smoked or fried and covered with melted lard for preservation.

Eggs were used sparingly because they could readily be converted into cash for purchasing flour, sugar, and other essentials which could not be produced on the farm. The same was true of chickens, although we did use them as an important supplement of our meat supply.

Milk products were an important item of food, but since most farms had only one cow, there were occasional periods when the milk supply failed. This gave rise to a system of give-and-take among neighbors as occasion demanded. My taboo of milk and milk products placed me at a disadvantage, but my natural appetite guided me to a rather well balanced diet, and I have become a living proof that milk is not an essential ingredient of nutrition for adults.

Sorghum molasses, used as a substitute for refined sugar in many ways, had the advantage of being produced without any cash outlay. We grew the cane and took it to the local cane mill where the juice was expressed and boiled down to syrup, the mill owner retaining a part of the product as toll.

One of the greatest disadvantages of our limited economic status was the scarcity of good, interesting reading material. Every home had a family Bible, which no one ever read, and there were a few other semi-religious or moralistic books, such as *The Royal Path of Life*, which had been peddled around the country neighborhoods by itinerant book agents. We took the local *Worthington Times* and for a time the *St. Louis Globe Democrat* (which was, incidentally, a staunch supporter of the Republican party), and the newly established *Indianapolis Star* as soon as we had daily rural mail delivery. We also had a few books, mostly received as Christmas presents, which played up Mother Goose literature and a few other childhood classics. An occasional magazine which we were able to pick up somewhere was a great treat. Our school readers were almost worn out with repeated use. Their contents ran largely to patriotic or moralistic stories of the McGuffey genre.

This dearth of good reading material was sometimes relieved for us in a special way. Since the country school building was closed during the summer, it was thought best to remove the small collection of books to prevent vandalism, and we became their custodians for a few summers. This gave us an opportunity to peruse leisurely many books which we did not have time to read when school was in session. One summer we were especially fortunate. One school in the township was being closed permanently, and we were given charge of its library as well as our own. This incident provided for me an introduction to some of the early works of Harold Bell Wright, the Sherlock Holmes stories of A. Conan Doyle, and, in later years, some of the early *Limerlost* stories of Jean Stratton Porter.

Mother was an avid reader of a current type of light romantic fiction exemplified by the works of one Mary J. Holmes. Several women in the neighborhood had a loosely organized exchange system in which these books, usually paperbacks, were passed around until they were almost worn out. I do not recall that we children were ever forbidden to delve into this literature as we saw the books lying around, nor do I remember that we ever had any interest in it. Some of our neighbors were very much opposed to this kind of literature. Any of the stories which involved an element of suspense were supposed to be conducive to the development of nervous ailments; and, although the stories were admittedly true to life, they were frowned upon because they were not literally true.

Many years later, when Dr. A. L. Kohlmeier and I were discussing some of the folk customs of the neighborhoods in which we grew up, he told me that in Dubois County there was this same objection to fiction of any sort simply because it was "not so." I have sometimes thought that the reading ability of some was so low that this was the main basis for their objections. They found reading so laborious that the effort should be spent only on factual material, and they never read much of anything.

Although I was handicapped for any heavy farm work requiring much walking, I was kept busy with care of the yard and garden, making repairs on buildings and fences, pruning fruit trees, keeping farm machinery in working order, and other such chores. I was also able to pick up a little money by doing similar work for some of the neighbors.

I worked for Mother's cousin A. N. (Newt) Newsom during the hay-making season for three or four summers. He had a large acreage of timothy meadow, the hay from which was much in demand for horse feed. I mowed and raked hay as fast as he and his other helpers could finish the process. For this I usually received

about a dollar to a dollar and a half per day, but this provided enough for my books and other school expenses.

About 1901 or 1902 Allen Gaskill bought what was left of the old Newsom farm and moved to the house just south of us where the family of Will Newsom (Mother's brother) had once lived, and I worked for him off and on for a few summers. Gaskill was devout Methodist, guided in his farm activities by the Bible and a code based on the phases of the moon and the signs of the zodiac. For example: beans planted at one time of the moon would provide a crop which all matured at one time—obviously advantageous if you wanted to produce dry beans. But if the same variety of beans were planted during another phase of the moon, they would flower and produce beans over a longer period, this being desirable if the produce were to be used as green beans. I expressed some skepticism about this theory and suggested that we make some experimental plantings to test it. His simple answer was that it was not necessary to make such an experiment because he *knew* the facts of the case. I never could get him to disclose the source of such information.

With another of his rules of thumb the case was a bit different. When we planted potatoes he directed that they be cut into pieces with one good eye on each piece, and then two pieces dropped in each hill. I asked why we could not cut the tubers into larger pieces, with two eyes on each piece, and then drop just one piece in each place. His answer was that if each piece had two eyes only one of them would make a vigorous plant. Being skeptical, I waited until he was not watching and made an experimental planting. To my surprise it turned out that he was right. I had no explanation for what I had learned, for I had never heard of the inhibiting effects that one part of a plant could have on another; but forty years later I was having my students in elementary botany make the same experiment.

From the time that I was about ten or twelve years old I had a small garden of my own. Some of the neighbors were puzzled as to why I did not concentrate my efforts on the family garden instead of wasting my time on growing a great variety of plants without regard for their usefulness, even some regarded as weeds. I had no explanation of my impractical interests, but years later they paid good dividends in connection with my work in botany.

In those days there was generally a strong feeling that as farm children grew up they should remain at home or at least nearby. Back of this there was often the selfish motive that their help was needed about the house or on the farm; but there was also the idea that the wide world was a wicked place and home was best. Enough evidence in support of this idea was provided by an occasional prodigal who had left home only to come slinking back for the barbecue of the fatted calf on finding the independence of the wide world less attractive than he had expected. Apparently little thought was given to what the result would be if this principle were carried out to its full extent, nor was much distinction made between a mere search for excitement and some more stable hunger, such as finding a job or continuing one's education, as the motive for leaving home.

Mother especially held this erroneous view, and many tears were shed when Winifred, on a visit with the Hartley family in Indianapolis, reported that she had landed a job and was planning to take a business course. As the years went by, the rest of us were able to soften the blow a bit by leaving home less abruptly. And all of us made the exodus stick and were able in later years to send financial help back home.

In the early winter of 1928-9 Dad had the misfortune of being thrown off a wagon load of corn fodder by a sudden gust of wind and suffering a broken leg.

When, after several weeks in the hospital at Linton, he had recovered to the point where he could hobble around with the help of a cane, and it became evident that his days as an active farmer were over, they sold the farm and moved to town where life would be a bit easier because of the availability of electricity and running water in the house. This move was made in March of 1929, but Mother did not get to enjoy the change in living conditions. She died near the middle of the following May. For years she had suffered from a weakened heart, complicated by hyperthyroidism, which had been partly corrected by surgery in 1920.

With various housekeeping arrangements Dad lived there to the end of his days in the late summer of 1947. But he remained active to the end. When he was past the ninetieth milestone, he was laid up for a time by a fall from an apple tree which he was pruning for a neighbor.