

As I Remember How It Was

Samuel Lesson Leonard, Ph.D.

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DEDICATION

This account of my life
is dedicated to my children

David Philip and Patricia Hope

ACKNOWLEDGEMENT

Although these words were written first in long hand, it was through the persistence and help from my dear friend Donna Green who typed, edited, and **made** suggestions to greatly improve the presentation of these events in my life. What is more important was her unselfish loving care, kindness, support, and counseling that enabled me to survive my intense grief which followed soon after Olive's death and the completion of this account. Donna, I will love you always as you loved Olive and I over the years.

Sam

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AS I REMEMBER HOW IT WAS

Introduction

There are certain events in ones life that have made such a lasting impression that they are frequently recalled to mind. It is **my** desire to give an account of them in writing so that my grandchildren, if curious, might like to know something of my life in relation to my extended family and of events which shaped the course of my life. Memories can sometimes play tricks on you so some errors in detail and in exact timing may not be accurate but the essential part of each story is true.

Period 1905-1912

I was born in Elizabeth, New Jersey November 26, 1905 so they told me but when I turned 14 years of age and needed a birth certificate, my birthday is stated to be November 27, 1905. Later, I found out the 26th fell on a Sunday so my registration was made the next working day. We lived at 1082 Lafayette Street in a separate apartment in the big house of my paternal grandparents. In back of the house was a large barn for several horses and carriages. A long grapevine covered the archway that led from the house to the barn. The street in front of the house was unpaved but later it was paved with yellow bricks. Gas lights were present along the street and were turned on and off

by a man each day.

My father worked for the New Jersey Central Railroad in an office in Jersey City. He commuted six days a week and often on Saturdays he would take me to work with him. On these days, he worked only half a day and in the afternoon we took the ferry boat to New York City. We usually visited the Aquarium then located at the south end of Manhattan. I remember seeing horse cars, a form of transportation going across town to the East River. The streets were filled with large trucks pulled by very large horses (no automobiles). Belgian blocks or cobblestones were the pavement of the street all along the water-front. Piers and wharfs for ocean-going vessels lined the west side of the street and the trucks carried merchandise to and from the ships. The iron horse-shoes and iron-rimmed wagon wheels made an ungodly racket on the cobblestone streets.

Close by the Aquarium was another ferry terminal for the trip to Staten Island, about a 25 minute ride. This ferry-boat ride was quite thrilling, one could obtain a good ocean "smell," see the Statue of Liberty close by, but more than that was the sight of literally a "parade" of huge ocean liners going to Europe and elsewhere. Fortunately, Saturday was the big day for many departing ships.

Sometimes, either 1910 or 1911, a large explosion occurred near the office where my father worked. A piece of heavy window glass broke off and flew just above my father's head to be embedded in a card-board box on a shelf in front of him. (His

back was to the trajectory of the shard.) A little lower it could have killed **him**. He never removed the glass and I saw it several **times**.

I attended the first grade in school before we moved. It seemed like fun except one day the teacher asked us to tell what we had for breakfast. I told her and also told my father what she asked of us in **school**. He blew his top at that and told me to tell her next time she asked that "my father said it was none of her business and not tell." The teacher made me sit in a corner of the room and I cried.

There was one chore I had to do for which I thoroughly detested. A few blocks from our home was an "ice house" where ice was made. I had a little wagon and I had to go to the ice house to buy 2 cubes of ice for ice boxes of my parents and grandparents, cost 5 cents each.

Pleasant times in Elizabeth came to memory. Vaudeville was one form of entertainment, no memories of moving pictures then. One night does stand out. After going to an evening show in 1910, father pointed out **Halley's** comet. He so impressed me saying, "if I live 76 years more, I would see it again." It so came to pass only I saw photographs of it this time. My father took me to a rally in 1912 at the dedication of an armory in Elizabeth at which Theodore Roosevelt spoke.

At times, usually on Sundays we would make a day excursion to the sea-shore, either Asbury Park or Ocean Grove. Mother would pack a lunch in a shoe-box, we would take a Jersey Central

Railroad train to Elizabeth Junction, then take another train to the sea coast. We never went into the surf, but played on the sand and dug for sand crabs. Always a treat on those days, it was popcorn and salt water taffy.

On October 21, 1910 my sister Ruth was born. The family, not so much my parents, would say that I will be in second place to my beautiful sister from now on and they rubbed it in. I am sorry to say we did not get along too well for many years but by 1931 we "buried" the hatchet and became close friends.

Visiting. Our vacation time, early on, was usually a few days visit to the Leonard family farm with the nearest railroad and postal service at Sterling, New Jersey. The Delaware, Lackawanna, and Western Railroad serviced this area. The farm was originally that of my Great Grandfather, Silas Leonard who died prior to my birth. Three of his unmarried daughters, Sally, Katherine, and Alice lived on the farm and eked out a living there.

To get to the farm from Elizabeth, we took the Jersey Central Railroad to Newark, a trolley-car across town to the Delaware Lackawanna and Western Railroad station, and the train to Sterling. We were met at the station by Aunt Alice who drove the one-horse wagon to bring us over the hill to the farm on the "Plains." The roads were dirt and the hill too steep for the horse to pull us up, so we all got out and walked part way up, except Aunt Alice.

These visits to **my Aunts**, to live in the **country**, to be

among farm animals (there were pigs, cows, chickens, and a horse) **made** a deep impression on me. I came to love these visits, very much, even after I grew up. I remember seeing and playing on the banks of the Passaic River, almost at its source, just a short walk west of the farm. The road from the farm to the river-crossing at White Bridge, led to the small village of Basking Ridge. [To digress: in the old church-yard of the Presbyterian Church in Basking Ridge is the grave of Samuel Leonard (who is the son of Samuel Leonard, of **Morristown** and a veteran of the Revolutionary War) and the father of Silas, my great grandfather. Silas and my grandfather, Samuel, are buried in the new cemetery in the Village.] Visits to the farm continued beyond 1912 so events overlap as to the exact time they occurred or remembered.

I learned to fish and to swim in the Passaic River. It was a pretty wandering stream, part swampy but with high banks in places. Sunfish, catfish, suckers, and pickerel were plentiful. The water was clear with a slightly brown tinge probably due to a small feeder stream (Black Brook) joining in from the east that drained a swamp.

The farm life then was quite primitive. Drinking water came from a well in front of the house. The kitchen had a pump by the sink connected to a "catch basin" which collected rain water from the roof, a wood-coal stove for baking and cooking, and a "cellar-pantry" to keep food cool. A vertical hand churn made butter. Bathroom facilities were an out-house with an all-weather walk-way to and from the back door. The house was quite

large which could accommodate many visitors. Each bedroom had a wash stand with a porcelain basin, water pitcher, and a "pot" under the bed. **Kerosine** lights were used and I do not **remember** how the house was heated in the winter. The out-buildings consisted of a carriage barn, a large barn for hay, horse and cow stables, a hen house, and pig pen. These buildings were very old and of natural gray color of weathered unpainted wood.

What seems to be little events to me now were big happenings to a little lad when visiting the farm. Next to the carriage barn was a small shed holding several barrels of stale crackers. These crackers were fed to the chickens and hogs as part of their diet. These crackers came from the National Biscuit Company through the good grace of Robert Waldron, a nephew to my Grandfather and my Great-Aunts Alice and Katherine who lived on the farm. Some of the crackers, though stale, were still edible and it was fun picking over and eating special items that appealed to young ones, like chocolate covered cookies. They tasted especially good because I was forbidden to go into that shed.

There was an apple tree close by the farm buildings that produced the sweetest yellow apples that ever was, I thought. To pick one **from** the tree to eat was special for one who lived in the city. In the farm yard, was a large wooden barrel that was called a "swill barrel." Into it went all left over food from the table, parings of food in preparation, excess milk or whey after making butter. Pails full went to feed the hogs along with

their regular diet. The noise they made in consuming it from a trough still remains on my mind. Once someone caught a large snapping turtle. It was put into the swell barrel possibly to fatten up before eating.

There was an ice-cream maker at hand. A trip to Basking Ridge for ice and salt was all that was necessary, all other ingredients were at hand. That ice cream could not be better possibly because eating ice cream at any time then was an expensive luxury. Often there were family reunions at the farm. There were all my first cousins present (from the Leonard side), their parents, and one other who I always looked forward to seeing when we visited the farm. He is Ellis Pierson Leonard, a first cousin to my father but our ages differed by about two years. (His father, Silas Pierson was the youngest brother of my grandfather.) Ellis lived about five miles east of the farm at a place called Green Village. He knew farm and country life and showed me things about the farm and nature which impressed me very much. In fact, it was the beginning of a life long close friendship - a brother I never had. We would go exploring in the woods, go fishing and camping together, and do kid things like catching frogs in the road-side ditches after a rain. More about our life together later.

My grandmother Leonard spent many summers at the farm and took care of my first cousins for prolonged vacation periods at their parents expense. My parents were not as affluent so sister Ruth and I did not enjoy this privilege. Nevertheless, visiting

the old farm where my grandfather grew up made a lasting impression on me and was, no doubt, a contributing factor to my choice of taking my first college degree in Agriculture. Big city life was not to my liking.

Period 1912-1923

My family moved from Elizabeth to Arlington, New Jersey about 1912. Before that, we moved to another location in Elizabeth, Reid Street, but for only a short while. It was here that my sister Ruth Mae was born October 21, 1910. The move to Arlington brought my family back to live under the same roof again with my paternal grandparents. Also I now lived closer to my maternal grandparents, Samuel and Eliza Mould. They lived in Harrison about 2 miles away so I was able to visit them more often.

The Mould's were born in England in the region near Wolverhampton, Staffordshire. They immigrated to this country, leaving their first born daughter to be raised by her maternal grandparents (their name was Aston). I never knew why they left England but rumor had it that the Mould and Aston families did not approve of the marriage and moving was a way out of squabbles. It was said grandpa Mould liked his "toddy" too well. Grandmother Mould made a trip back to England in the late 1880's for a visit and was pregnant with my mother at the time. It so happened mother was born there and returned before she was a year old to the United States. Other than that brief period the two

sisters never saw each other again.

In 1932, on my way to attend the Physiological Congress in Rome, Italy, I stopped over in England to visit my Aunt May and her four children, my first cousins. Aunt May Brown "was a spitting image" of my mother, only when she spoke could I tell the difference.

Grandfather Mould was quite well educated as I was told. He was a pattern-maker, made objects out of wood to be used as templates for castings on iron or steel. When I knew him he worked for the Crucible Steel Company in Harrison. My mother told me that when young she lived in Philadelphia, Pittsburgh, and places where iron manufacturing needed pattern-makers. Grandfather Mould died in his 60's in 1916. Grandmother Mould died in 1941 at the age of 91.

Our home in Arlington was 722 Kearny Avenue, a main street endowed with a trolley-car system. The route was from Newark to Hackensack with some cars going only to the limit of Arlington. Across the street was the grade school I attended, grades 1-8. Kearny High School from which I graduated (January 1923) was about two miles south on Kearny Avenue. While we lived in Arlington the political center was Kearny. Mail was addressed to us as Arlington, the Erie Railroad station was Arlington but the police, taxes, and government were from the City Hall, Kearny.

Kearny Avenue was on the top of a slight hill that descended to the east bordering on a swampy meadow extending seven to eight miles to the Hackensack River and Jersey City. In the early

days, mosquitos breeding in this eastern saltwater marsh came to plague us in great swarms. An east wind made it worse so that one had to cover one's faces to prevent **them** from being inhaled or getting into one's eyes. Later on, oil was sprayed on the swamp and the insect problem became tolerable.

On the west side, there was steep descent for a quarter of a mile to the Passaic River. This river, so pretty at its source, was now a cesspool; dyes from the Paterson silk mills, effluent, and sewerage from other towns made it so no living things could tolerate this habitat. Two to three-foot tides occurred on the river so one could see the ink-black mud at low tide stained by the ink-black water and at times the odor from the river was over-powering. Yet my grandmother Mould told me that years before, she had purchased shad that were caught in this river when the fish were on their spawning run.

Arlington was a town where workers mostly commuted to either New York or Newark. Two factories were in town, one made celluloid a forerunner of plastic, and the other made pearl buttons. Fresh water mussel shells were shipped in. Machines cut out circles for different size buttons from the shells and I used to collect some of the left over shells with holes in them. I wonder if these buttons are still being made? Mussels are collected from the Mississippi River and the feeder rivers but with pollution and the loss of fish, the mussel population could be depleted. Larval mussels need to live on a fishes body to complete their life cycle.

The hill upon which we lived consisted of red shale-like rock. At the base of the hill on the east were a number of cave openings leading into the hill. It was said that these were old mine openings of copper mines in use prior to the Revolutionary War. The Erie Railroad coming in from the west had to pass through a cut in the red rocks on its way to Jersey City. This branch of the railroad, known as the Greenwood Lake Division served as a commuter line to many localities farther west and north as well as a freight line. There was a railroad bridge over the Passaic River quite high above the water. During World War I, a large group of soldiers guarded the bridge day and night. Several towns west along the Erie were centers for **manufacturing** war munitions and they had to be delivered safely to Jersey City. No incidents or sabotage occurred here during the war.

The town of Lynhurst about 2 miles north of Arlington had a munition plant located on the east side of the same ridge as our town. One cold day in March it blew up. I could see and hear shells exploding high in the air, like fireworks, from where we lived. Three inch artillery shells about 15 inches long were being filled with TNT. Luckily no one was killed and plant location was such that there was no damage to the town. A few days later, I walked to Lynhurst to survey the damage. No building was standing. Barbed wire and electric fences were flattened and shells were all over the ground, some intact,

others blown open with jagged edges. I picked up and brought home a perfect unexploded shell. The family panicked and it was promptly turned over to the police. They were really quite safe as the nose-piece was plain steel and not the fuse-containing nose-piece screwed on the end before firing from a gun.

There were other munition plant explosions in New Jersey during this war. A powder plant at Haskell blew up but too far away to be heard. The "Black Tom" explosion in Jersey City was heard and seen at night from my bedroom window. The noise awoke me and the light from the fire filled the whole eastern sky. Incidentally, I should point out, I could see the upper portion of the high rise buildings of New York and the top of the Statue of Liberty from my bedroom window. Thus the fire following the explosion was easily seen. Another plant blew up at Morgan near Perth Amboy. The reverberation was felt in Arlington (and blew out plate glass windows in Newark, some distance from the explosions). I never learned whether these fires were the result of sabotage or accidents.

During the First World War, I remember the "Liberty Ships" being built in Kearny where it bordered on Newark Bay. It was so that I played a saxophone in a Boy Scout Band and several times our band supplied the music at launchings of one or more ships. It was an interesting experience for a young one and of course it got me out of school for a day. Our band also marched contingents of draftees from Kearny City Hall to Harrison where the men embarked on the Pennsylvania Railroad trains to go to

Fort Dix for training. These events were like a parade aimed to stimulate the war effort and sell "Liberty Bonds."

Work During My Teenage Years. The first job that I had that paid me money was when I was about 11 or 12 years old. There was a vegetable store on Midland Avenue in Arlington which in those days sold only fresh fruit and vegetables. Separate stores sold "dry" food groceries and separate stores for meat and poultry. No one-stop food stores. Orders for vegetables were either phoned in or customers came to the store to select desired items and had them delivered. The store owner - Jake Siegil - hired me as a helper to deliver the orders by way of a horse and wagon. I worked from 7:30 AM to mid-night on Saturdays only, for \$1. Of course I had all the fresh fruit that I wanted to eat and I am sure I consumed another dollars worth.

As I grew older, I had several jobs, some during vacation times, some after school, and on weekends. I had to get "working papers" at age 14 to work in New York City at the Mutual Life Insurance Company, at Liberty and Nassau Streets. I was a "runner" boy, delivering mail for interoffice traffic or to some outside agency nearby. The hours were from 9:00 AM to 4:00 PM with a **half-hour** for lunch which the **company** furnished. I worked there for two summers and again for a longer period prior to entering college. My pay was \$12 a week, commuting on the Erie Railroad was \$6 a month. My great Uncle David Leeson Leonard, who lived near by took the same train each day so I had company. He was in the wholesale tea and coffee fcusiness. He supplied tea

and coffee to **my** grandfather and another of his brothers, Silas Pierson who were in the retail trade.

To get to New York **from** the Erie terminal in Jersey City one could take a ferry to Chambers Street or take a subway under the Hudson River to **Cortland** Street. The latter cost 5 cents, the ferry ride was free with the commuter ticket. I enjoyed the ferry with the sights of busy river traffic and the sea-breezes but the whole idea of commuting each day got me to thinking that in the future, I would like to live closer to my work, even within walking distance if possible. I did not like the bustle, the hassle of the crowds of people, and the obnoxious noise and odors. From that time on, I resolved never to live or work in a large city for the rest of my life if at all possible. I had my wish except for an interlude which I will tell about later.

One **summer**, I had a job in Newark with Cluett and Peabody, makers of Arrow Company shirts, collars, and underwear. My job was to fill orders for the retail stores in North Jersey areas, tie up the boxes of items to be delivered by truck. After school jobs consisted of working in a butcher shop near **home**, sweeping out, delivering packages, going to the bank for deposits or getting change, and even waiting on customers for simple orders. The last after school job I had was for a jewelry store in Arlington. I did custodial work in the store and was entrusted with a little black bag containing jewelry to be repaired and taken to Newark to have the work done. Newark seemed to be a center for the jewelry business. All in all, I learned the value

of hard, honest work, and the money that came with it to give me a feeling of independence.

Social Life to 1923. My parents saw to it that I should learn some of the social graces. I was very bashful, did not associate with young ladies or go to parties with young folk my age. As it was, I never had a "birthday party" until November 26, 1940 when my dear wife gave me a surprise birthday party in our new home which we had just built on Dewey Drive in New Brunswick. So it was I took piano lessons early on before I turned to the flute and lastly the saxophone when I played in the Boy Scout Band. Also I took dancing lessons while in high school although I never put this skill to use until I went to college. Even then I was gently coerced by my Delta Upsilon fraternity to get a partner for fraternity dances.

The young men with whom I associated varied over time. During grade and high school years, one was my next door neighbor, Allan Scott, who eventually went to Amherst College, became a Rhodes Scholar, then went to Hollywood to write plays and scenarios for the movie industry. Two doors away lived George Haight, an older lad who went to Yale and eventually to Hollywood to become a movie producer. Gerald Bannigan went to a teacher's college (Normal School) and became an athletic director in the high schools in New Jersey and a referee in professional sports.

Family associations, primarily among the Leonard clan, was a good part of my social life. My father's older sister, Rose May

married Arthur Mulford (in Elizabeth). He was an engineer for the Jersey Central Railroad. They had two sons, Virgil and Cecil. Virgil the older went one semester to Cornell University but was taken with influenza during the horrible epidemic of 1919, and returned home. [A word on this epidemic. Many were afflicted, all in my immediate family and though close to death managed to survive. All theaters and churches were closed. Our church was converted into a temporary hospital. Coffins were stacked in cemeteries. No treatment was known - no antibiotics for bacterial infections that followed the virus attacks.] Virgil then went to Columbia University and graduated with A.B. and E.E. degrees. He rose to high office in the American Gas and Electric Company before a sudden untimely death. He had one daughter. The Mulford's moved to Arlington about 1920 and Virgil and I would go fishing. Cecil and I were in high school together for our last year and we started college at Rutgers in 1923. We roomed together, joined the Delta Upsilon fraternity. He dropped out after one year, married Laura Kennedy and had two children, Ross and Judith. Ross graduated from Annapolis (Naval Academy), rose high in the ranks of the Marines, retired and is now one of the Vice-Presidents of the National Geographic Society. Judith is a school teacher.

My father's sister, Ida was married to William Vail. He was a professional organist and played in a large church in Newark but his vocation was a banker in Arlington. They had a daughter, Margaretta who married young to Robert Diehl who, like his

family, were associated with Singer Manufacturing Company. There were no children.

My association with cousin Ellis Leonard became closer during later years. He came to live with us for awhile when we both worked before going to college. The summer of 1924, at the end of my first year at Rutgers, I had a job as a laborer for a contractor who was building farm barns on an estate in Gladstone. I was paid 50 cents an hour for an eight hour day, six days a week. It was then I lived with **Ellis's** family in Green Village, commuting to work by bicycle for two miles to be picked up by a motorcycle for the rest of the trip. **Ellis's** parents, Uncle Pierce and Aunt Blanche were always very dear to me.

A word of family on my material side. Mother's younger brother Bob and his wife Laura lived and worked in Detroit and retired to Dresden, Ohio on a farm. There were no children. In later years we visited them on our trips to Kansas. The older brother, Samuel Alfred Mould married and was divorced. He spent practically all of his life in Peru (Lima), was in the mining business, but his ex-wife and two daughters returned to East Orange, New Jersey, One girl died young, Beatrice, the older is still alive and lives in Florida. Mother's sister Gertrude married John Allsop and they had two sons, George and John and a daughter Elsie. They lived most of their life in Philadelphia so visits were infrequent. George was a carpenter-cabinet maker and died young; John was killed in World War II, and Elsie, near my age is living in Arizona. I have lost track of my four cousins

in England although I did meet all of that family once, in 1932.

My sister Ruth was five years younger than I. For some reason we did not get along too well until about the time I did Post-Doctoral work at Columbia Medical School in New York City. We were separated eight years while I was in college and now living close to home, we realized how foolish it was to bicker. From that time on, 1931, we became close and good friends. She married Charles Staines and they had no children.

Timely reunions were held at the holiday seasons. Here reunions were held to include my paternal grandparents and their children and grandchildren. The families all lived close, not as it is today with subsequent generations living far apart. A lot has been lost in this change in our life style and family ties. Those were happy times when all 13 of us were together but as I write this, I am the last of the family clan.

The Period 1923-1927

The Early College Years. How I ever came to attend college is still a wonder to me yet. The financial conditions of my parents was not good. None of our clan of 13 attended college except Virgil **Mulford**, he was the first one. My grandfather Leonard was not supportive with the idea of a college education and he lived under the same roof with my family! My father was non-committal, my mother was for it, if I wanted to go on with my education. During my last two years in high school, two classmates, Howard Little and Charles **Schieman** and I became

friends, decided we wanted more education and were stimulated by excellent teachers. We studied alone first, then together as "devil's advocates" to insure we would do well in our classes. And it was fun, not a drudgery, and perhaps these experiences re-enforced our desire to attend college. We were encouraged by our teachers who gave us extra help beyond regular school hours. (I wonder if this could happen today?)

Looking back to that time, I remember I did not pass my arithmetic examination in the eighth grade ordinarily needed to graduate to high school. Nevertheless, they sent me on to high school at mid-year which was January 1919. During that first term, I took Algebra, liked it, and received an "A" in the course; it made sense. In June of 1919 I had to take an arithmetic examination to receive a diploma and graduate from grade school. From what I learned, I failed again but my good grades in high school won me a diploma.

High school was great. Good stimulating teachers who instilled in us a great curiosity and desire to find answers. There was no big athletic program in the school and girls did not distract me (i.e. I was very bashful). So I studied hard, worked to save money just in case I could see my way to college.

My four years in high school were completed in January 1923. Thus I had 9 months to work to add to the money I had already saved for college. I went to work at the Mutual Life Insurance Company in New York City where I previously had summer jobs. During this period, I came to hate commuting and was not keen on

the possibility I might have to live in a large city to make a living at some future time. My earlier resolution not to ever live and work in a large city, especially New York City, became re-enforced.

During my last year in high school my cousin Ellis Leonard and I became close friends and mutual confidants. We visited each other frequently. Since he lived in a rural setting and was very knowledgeable on farming I became intrigued on this lifestyle. If I can recall correctly Ellis then came to live with us in the Fall of 1922, worked in Newark for Fidelity Trust Company, and commuted with my father daily.

To digress, I would like to tell of an incident that comes to mind. Our mutual Uncle David Leonard who lived in Arlington, gave Ellis and I his old 1913 Ford Roadster. This vintage car had no self-starter, a magneto generated the electrical requirements so only when the engine was running were lights possible, solid leather seats, a fold down cloth top, and a solid brass radiator. Ellis being older than I had his drivers license so he was able to teach me to drive. We named the car "Puddle Jumper" and it served us many years, all through college together and several years after that in Ellis's hands. Late in the summer of 1924 we toured New York State in it, going as far west as Niagara Falls, then across the state to Albany, and then home. Not being affluent, we often slept in barns when in the country and made our meals frequently by the roadside. This expedition led to many such touring and camping trips later in life but in

style.

So, in the spring of 1923, I decided to apply for college at Rutgers University and to take the state **competitive examinations** in an attempt to receive a tuition scholarship. Earlier I had considered applying to Stevens Engineering School in Hoboken but the costs seemed prohibitive. With my dislike for big city life and commuting, I decided to apply for studies in Agriculture. I took six examinations over a three day period and was fortunate to obtain a scholarship; \$250 a year for 4 years. Allotment of these scholarships was by counties and their population. Hudson County where I resided had 12 slots so I was happy to win one.

It so happened that cousin Cecil **Mulford** was ready for college. He lived in Arlington near by and we graduated from Kearny High School at the same time. So off we went to New Brunswick, taking the "**Puddle Jumper**"; he entered the Liberal Arts College while I entered the College of Agriculture. Unfortunately Cecil was not a "student," intelligent yes, but not driven by this innate curiosity one must have to learn more and more. His tuition was paid by his parents including other expenses whereas the extra necessary expenses for me was my responsibility. I had saved about \$1,600 when starting college and this was parcelled out carefully. Anyway, Cecil dropped out of Rutgers at the end of the first year, went to work and soon married. We both joined the Delta Upsilon Fraternity in 1924.

In September 1924, Ellis entered Rutgers, in the College of Agriculture and we roomed together for the next three years. He

joined the Delta Upsilon Fraternity and we roomed together there for 2 years. During his first year we had a room in Winants Hall dormitory, a very old building. Looking back it was an old wooden fire trap. The fire escape was a long hemp rope with hand sized wooden blocks every two feet. It was a good 40 feet to the ground. We had food snacks in our room of course but there were lots of mice competing with us for it.

In order to stay in college, money was needed above tuition. Unlike today, living expenses exceeded tuition costs to go to college. During the college year, I took on various jobs: dish washer at a tea-room in town, baby-sitting for one of the family's of Johnson and Johnson Company, and working Saturdays for the Agronomy Department. During my first summer, that of 1924, I worked as a laborer for a construction company at Gladstone, New Jersey. I lived and boarded with **Ellis's** parents who lived in Green Village as it was only a few miles from the place of work. I made \$4 a day, 6 days a week. The following summers, I worked full time for the Agronomy Department as a laborer-technician. Such work involved corn-breeding for hybrid vigor, levels of winter-kill on alfalfa, cultivating different grasses for golf courses, and the usual care of experimental plots. At this time, Ellis worked in the Dairy Department so we saw each other during the summer. I enjoyed visiting with him at the last milking time, in the early evening, and having a glass of raw milk at the source. Unfortunately, I picked up Malta fever from drinking unpasteurized milk. Bacillus abortus was in

the herd and that presumably was the causing agent. The diagnosis is much like that of typhoid fever. This occurred near the end of the summer of 1925. I spent two weeks in the hospital in Newark. Recovering was slow and I returned late to college but in time to keep up with my class.

A few extra-curricular activities took up some of my time, mostly early on then dropped off as the need to work became imperative. I tried lacrosse for awhile but not being an athletic type for lack of opportunities prior to college, I quit. I spent some time as an assistant to the swimming team, keeping the athletics in shape, and learning to improve my swimming ability. I never was a good swimmer.

Fraternity life was good for me. It helped a lot in overcoming my shyness. In our weekly meetings public speaking was stressed. The brothers had to address the group in different ways; such as readings, declamations, debates, and then the speaker was subject to criticism and advice. Even then my poorest grade at Rutgers was a D+ in public speaking which was a compulsory course for all freshman. Perhaps my fraternity helped me at least to pass the course. Two or three house parties or dances were held in the fraternity house each year. Again, the brothers insisted I attend with a girl of my choosing. My sister introduced me to some of her friends whom I brought to the dances.

The fraternity was strong for academic success and the grades of all the brothers were discussed periodically in open

meetings as a **stimulus** for hard work. Prohibition was the law of the land and liquor was not allowed in the house. Looking back on my life with my "DU" brothers I can say that if all fraternities promoted a college life style that I grew up with all college students should belong to a fraternity or some similar group with these goals in mind.

I thoroughly enjoyed my studies at Rutgers. The professors were stimulating and the whole environment was conducive to study. Sport programs were sane and under strict control by the faculty. Being enrolled in the Agriculture College, the courses having to do with practical farming were not very interesting probably because of my life in a city and lacking farm experience. Some courses were interesting from my view point, particularly those in Animal Sciences and to some extent in Agronomy. It was soon evident that I could never be a farmer let along own one. Fate is unpredictable, they say, because through an inheritance to my dear wife from her parents, Orton and Hope Rees, a 400 acre farm in Kansas came into our possession. This is located near Baldwin City, Kansas.

So, when ever possible, I took courses in the basic sciences. It can be said that the curriculum of this college led to a broad generalized training and almost as good as that in the Liberal Arts College. A foreign language was not required however. It was a professor in the Liberal Arts College, that stimulated me to become a Zoologist. That was Dr. Thurlow Nelson, whose course in my sophomore year set the stage for my

life's work which I believe came after his first lecture. I took all the possible courses in his **department**, and he was instrumental in enabling me to enter graduate studies at the University of Wisconsin where he had received his Ph.D. degree. It was after I went to Wisconsin that I came to realize that the training I received at Rutgers was superb.

Most of the Rutgers professors, in the sciences for sure, were good teachers and also carrying out a modest amount of research. But they always had time to see and talk with students who took the trouble to seek them out. Rutgers sent on many students for advanced degrees and this was certainly true for those in biological subjects. The enrollment at Rutgers during the period 1923-1927 was about 800-900 which made for close relationships among students and faculty. Even today, the advantages of small colleges for the bachelor degree have to be considered.

In recalling some non-academic events that occurred during my undergraduate days, I remember one winter night, a fraternity brother said he would run naked (except for shoes) from our house on Bleeker Place to "**Holy Hill**" (a long block to a school for educating Dutch Reformed ministers), for a fee. The money was collected and he made, as far as I am aware, the first "streaking run" that many years later was in vogue for exuberant college men.

One day, in 1925, Dr. Jacob Lipman. Dean of the Agricultural College was lecturing to us when he added the news that he would

be absent the following week as he was going to testify at the Scopes's trial in Tennessee. Scopes was a high school teacher fired for teaching evolution in a public school. This **problem** of teaching evolution in public schools is still provoking litigation today. Incidentally, I personally knew three of the scientists called to testify; including the Dean was Dr. W. Curtis from the University of Missouri, and Dr. Fay C. Cole from the University of Chicago.

R.O.T.C. (Reserve Officers Training Corp) was compulsory for the first two years at Rutgers for all able-bodied men in all Colleges. We were issued "khaki" wool uniforms left over from World War I, five years earlier. These consisted of a pair of pants (knickers), a shirt, a broad brimmed hat (like U.S. Rangers wear today), and leggings (puttees) which were wrapped around the legs and lower part of the pants like bandages. We furnished our shoes. It was a rag-tag group of men marching around in close-order drill once a week. Of course the leggings unrolled and one had to drop out of line frequently to re-assemble them. We carried guns which were stored in the armory but the uniforms were taken home. The last two years in R.O.T.C. were elective leading to a second lieutenant rank upon graduation. I was made a corporal in my second year. Why, I never knew. Besides drill, we had lectures on how to bayonet a man at close quarters and other dirty tricks to survive in battle. At the end of each school year, R.O.T.C. put on a mock battle on the football field using blank cartridges. A mortar was fired at an angle so that

the steel shell (no powder in it) arched up to fall into the Raritan River a few hundred yards away.

During my senior year, I took a course in "independent study" in which I picked a **small** research topic. This work gave me an insight as to what a Zoologist would do for a life's work. A classmate, Rolland Main was in the same program and we became fast friends. One night in looking in a dirty closet in our old biology building (Jersey Hall), we found a **jar** of metallic sodium immersed in oil. Curious as to what would happen should a large stick of sodium, the size of a quarter pound of butter, were to be dropped into a glass milk bottle filled with water. So one night late, we set the bottle of water close to a tree, dropped in the sodium, and ran to hide behind some nearby trees on the campus. After a few minutes there was a terrific explosion; we left the scene and decided never again. There were no repercussions afterwards.

I was elected to the Honorary Agricultural Fraternity, Alpha Zeta, became an officer in the group, and was a delegate to a convention in Chicago. I was president of the Agriculture Club, open to all members of the College. In my senior year, I was elected to the Phi Beta Kappa Society and Associate member to Sigma Xi (full membership came later at Wisconsin).

Period 1927-1931

The **summer** of 1927, after graduation, was spent at the Marine Biology Laboratory, at Wood Hole, Massachusetts. Rutgers gave me a scholarship to defray tuition costs and loaned me a microscope which enabled me to take the course in Invertebrate Zoology. It was an inspiring experience and absolutely left no doubt in my mind that I was going to be a Zoologist. After the six-week course was completed, I found a position in the close-by U.S. Bureau of Fisheries as a technician working for Dr. Oscar Sette, on the life history and population of mackerel. Dr. Sette was there working for his Ph.D. degree at Harvard and wanted me to apply to Harvard to get a Ph.D. degree in fish biology. I declined as I was already admitted to the Zoology Department of the University of Wisconsin on a teaching assistant.

My job at the fishery laboratory was to identify and count fish eggs and newly hatched eggs of the various species of fish taken in a plankton net in Vineyard Sound and neighboring coastal waters. The project was to gather information to hopefully predict the future "catch" of marketable adult mackerel. Incidentally, I was invited to return to this job the following summer and did. The U.S. Fisheries paid my return fare from Wisconsin, provided sleeping quarters, and paid me \$100 per month. I boarded at the Marine Lab for \$7 a week.

During the spring term of my senior year, I applied for a graduate teaching assistantship at the Universities of California, Pennsylvania, and Wisconsin. My first interest was

to study parasitology. This came about **from** my senior independent study project which involved the effect of the thyroid on a protozoa organism living in the gut of a tad pole. As it happened I chose Wisconsin and was directed to work under Dr. C. Herrick who taught parasitology.

The trip west by car in September 1927 was unforgettable. There was a senior at Rutgers when I was a freshmen, named Charles K. Weichert, who, I found out was driving back to Madison for his last year as a graduate student in Zoology. Weichert lived in Bloomfield, New Jersey about six miles from Arlington so I made arrangements to drive out with him in his model T-Ford coupe. The ride was unforgettable, driving 1000 miles, in very hot weather and of course no air-conditioning; it was unheard of! We went by way of Niagara Falls, through Canada, exiting at Detroit. On entering Canada, the boarder guards made us unload all our baggage and they examined every piece in detail including boxes of books which we had. It was miserably hot and the inspectors were surly. I have always disliked going into Canada every since because of this first impression. We eventually got as far as Chicago late in the afternoon with temperatures in the high nineties, I am sure. We went to a beach on Lake Michigan, wading in to cool off, then drove on to Madison arriving exhausted about mid-night.

I had previously made arrangements to live in a rooming house at the home of the parents of the wife of Professor of Zoology at Rutgers, one Dr. Alan Boyden. He had also received

his Ph.D. from Wisconsin University. The room was for two; two simple desks and chests of drawers, and tiered bunk beds. My roommate was Dr. Roland Renne, both of us in the 1927 class in Agriculture at Rutgers. He was studying for his Ph.D. in Economics. Eventually Renne went on to teach at Montana State University and later became their President for 23 years. We kept in touch these many years but as I write now, he passed away in 1988 with Alzheimer's disease.

As to how we lived as graduate students I can say everything was "cheap" including our stipend as a teaching assistant. The stipend was \$75 a month for 10 months but \$50 yearly had to be paid back for library usage. One had to look for a job for the two other months but I was always fortunate in obtaining paid jobs. I paid \$2.50 a week for my room. To eat out, one paid 10 to 20 cents for breakfast, 25 to 30 cents for lunch, and a good supper cost 50 cents. Later we made lunch in the laboratory - one can of Campbell's soup diluted with water for four, served in laboratory finger bowls. Bread **and** peanut butter rounded out the lunch. Soup was three cans for 25 cents, bread 5 cents a loaf, and sometimes baloney was incorporated. I sent my laundry home as it was very inexpensive to mail then and my beloved Mother was good to me.

On occasion a group of graduate students in the Zoology Department on a Saturday evening would have dinner at the Simon's Hotel located about two miles from the campus. It was a blue-collar business man's hotel. The food was outstanding, very

large portions, a five course dinner including dessert and coffee. But even better, they served Wisconsin cheddar cheese FREE, on the table, all you could eat, and the meal was 50 cents. It was too far to go regularly but it was a treat.

As to relaxation or entertainment, I attended **home** football games at 50 cents admission for students. They were spectacular at a University of 10,000 students compared to the 900 students at Rutgers. We went to the movies on Saturday nights at the 9:00 PM show. There was a "double-feature" show followed by a second double feature show as a pre-view of the first half of the coming week. All of this for 50 cents; we got home about 2:30 AM.

There was no social life among the graduate students. There was one departmental picnic at the summer home of the Chairman, Dr. Michael Guyer, located on the shore of Lake Mendota. On occasion, a dinner was at the home of my major professor, Dr. Frederick Hisaw. Most of the graduate students were not married, I can think of only three that were, out of 16 in the Zoology Department. There were several very close friends among the graduate students during my four years: Dr. Weichert and Dr. Harold Wolfe both deceased, Dr. Roland Meyer now retired from Wisconsin, and Dr. Roy Greep now retired from Harvard.

Prohibition was the law of the land during my stay at Wisconsin and there was no excessive drinking. As everywhere, there were "speak easies" or places where one could get "take out" or "consume on the **premises**" liquor and beer. I went to one once, to see what it was like. It was in the basement of a large

house, "needled beer" was sold which is best described as follows: take a 12 oz glass bottle made to hold home brewed beer, pour off a small amount of beer from the neck of the bottle, and this amount was replaced with alcohol or ethyl ether. I never went back and drinking was not my style as an important factor in my life.

In those days, graduate students worked long hours, from 8:00 AM to 11:00 PM or midnight. Sunday morning we eased off but the afternoon was a good time to spend in the library. During my last year at Wisconsin, I had the opportunity to become an instructor in the department at \$1,800 a year or Dr. Hisaw's research assistant at \$2,000. I chose the latter. This made it possible to buy a used 1929 Ford roadster, with a fold-down top and a "rumble-seat" for \$350. This happened in the spring of 1931 so that I was able to visit a few of the scenic places well known in Wisconsin.

I did play at golf for exercise, off and on during my stay at Wisconsin. A young Assistant Professor, Harry Fevold, in our department would take me and others in his car. I purchased a golf bag with 4 clubs and 3 balls for \$5. We played in the late spring and summer, often so early that we could return to 9:00 AM classes. The fee for 9 holes was 25 cents¹

The Biology Building at Wisconsin housed Zoology in one wing, Botany in the other with a common series of mailboxes in the foyer. A woman graduate student in Zoology, Opal Wolf, much older than I said to me one day in 1929, "Sam, you should see the

new Botany graduate student, she is as cute as can be and just right for you." Well, one day I spotted her at the mailboxes, spoke to her, and was very much impressed, in fact, fell for her but did nothing about it. Bashful still, with no extra money to court a lady and quite devoted to my studies so nothing developed. I think we later had a couple of "movie" dates, that was it. I remember to this day, the yellow knitted dress she wore on our first encounter at the mailboxes and she still has the dress. This pretty young woman is Olive Rees and I said to myself I would like to marry her or certainly one like her someday. You know the rest of the story!

The reader of this "opus" would probably not be interested in the routine day-by-day activities while I was preparing for my Ph.D. degree. There were "ups and downs" in the various aspects of classes and research. One incident will suffice, as it was serious and funny too. One cold day in March, a monkey got loose and as we tried to capture it, it bolted clean through a big plate glass window, got on the campus, and took refuge in the top of a **tall** elm tree. It was a valuable research animal and we wanted it back. In the hours we chased it outside in the cold, most of us caught cold. We placed food and water at the base of the tree for the beast. After a couple of days it disappeared and a few days later we received a call from a girls rooming house indicating that they had a monkey, captured under a waste basket. We then got it back, in good health, we caught the colds!

In August of 1931, after receiving my Ph.D. degree, my classmate Dr. Harold Wolfe and I planned a trip to California in my Ford roadster. All went well till we got to Gillette, Wyoming which was then just a little sleepy western town, probably 2,000 population (not so today after oil and coal discoveries). At a restaurant, I drank the water which was alkaline (Mg SO₄). The bad effects began that night, severe diarrhea. The condition was **spasmodic** as we continued west but the worst part there were no trees in these desert regions when a spell over-took me and gas stations few and far between. No rest stops at all. At Salt Lake City we decided to return home. We stopped at Topeka because I was very weak and I knew Olive Rees lived there so I called her, explaining the predicament. So she and her mother invited us in and they nursed me for a couple of days until I felt strong enough to continue on home. I remember nothing of the last 1,000 miles to New Jersey except dropping Harold off at his home in South Jersey. It took me several years to get over the effects of that poisoned water. It is possible that the condition of my intestines to begin with was not good. Malta fever in 1925, and also I suffered with spastic colitis in my last two years at Wisconsin. Anyway, the respite I had in the hands of Olive and her mother made a lasting impression on me so much so that when the opportunity arose, I married Olive in 1934. This was the best decision I ever made in my life.

I would like to expand on that trip west in 1931 to indicate what it was like to go touring in the west compared with that of

today. There were practically no paved roads as we know them today except within city limits. There were mostly gravel-covered with a **"wash-board"** surface for many miles which jarred one badly. It is a wonder parts of the car did not fall off. We slept in rooming houses for travelers, paying about \$1 to \$1.50 per night. They were very nice, never was upset because of unwanted conditions. Gasoline was 20 to 25 cents a gallon. We ate in restaurants for breakfast and supper, and took the "makings" for lunch with us.

One of the many impressions that has remained was the abrupt lack of trees when we crossed the Missouri River at Chamberlain, South Dakota. All one could see was treeless prairie and sage brush. We took a by-road to visit the Badlands, South Dakota on rutted dirt roads where signs were posted "Do not take this road if it has been **raining.**" Rain is usually scarce there, so we made it safely. We visited the famous "Wall Drugstore" at Wall, South Dakota after it had first opened and spoke with the owner. Years later when I visited Wall with my family, the owner was still alive and the store much enlarged. If you have ever seen this store so famous in the west, you know it sells almost everything imaginable, including drugs. I believe this was the forerunner of many modern drug stores some of which are in Ithaca.

We visited the Black Hills of South Dakota where the faces of four presidents are carved on mountain only then one face had not yet been completed. In **Wyoming**, we made a side trip to visit

the "Devils Tower" and saw many prairie dog villages en route. 1931 was a very hot dry year and grasshoppers were a plague. In some places the roads were covered with both the alive and dead. They clogged the car radiator which had to be cleaned periodically. We bought a screen to place in front of the radiator to ward off the insects. In eastern South Dakota, I remember seeing harvested wheat piled up on the ground as there was no market for it and all available storage was filled. This was the **time** of the Great Depression. Nearby, many of the corn fields were leveled by the hordes of grasshoppers. The wheat escaped the insect devastation,

In Wyoming, we saw prong-horn antelope and many herds of wild horses but years later, about mid-1950, when I took my family west on a trip, no wild horses were seen. They had been killed off for meat for European markets and for dog food in this country. One such slaughter house was in Rockford, Illinois, at the place where "**Ken-l-ration**" was produced. I used to visit the plant to obtain horse pituitary glands for research work. Wyoming is the state of abundant "red rock," to me it is the "text book picture" of the dry, semi-desert, sage brush filled state that one conceives of the west.

Harold and I had to cross the "Big Horn" mountains and we chose to go to Sheridan thence over Granite Pass. This was a hair-raising trip, never having encountered such mountain driving before. The road was just dirt, not even gravel and in fact had only just been open to traffic a few weeks before. No guard

rails, hair-pin turns, and at several spots we saw trucks, a mess of wreckage at the **bottom** of some cliffs hundreds of feet below. Eventually we got to Cody and Yellowstone Park.

The sights in Yellowstone Park were incredible and made a lasting impression. The roads in the Park were thinly covered with gravel. Traffic was sparse compared to what it is in later years. Many black bears, with their cubs sometimes, would line the road begging for hand-outs. Nearby Old Faithful, a place was set aside with tiers of seats so that tourists could watch the bears feed on garbage placed on what resembled a stage of an outdoor theatre. At dusk, a group of black bears would come out of the woods in back of the feeding platform. They would paw over the garbage, cuff one another according to a "pecking order," and eat. Later one bear would rear-up and let out a loud "woof" and then all the bears would move off to one side back into the woods. Next, in marched a number of big grizzly bears to eat as did the others. After a while, the rangers urged us to go back to quarters, quickly.

In the Park, we slept in crude simple cabins for \$2 a night. The cabins were in rows with the toilet facilities at the end of each row. If one had to "go" at night, the fear of grizzlies was always there and one moved at "quick-step" time! We visited all the main attractions in the Park, then drove south to Jackson's Hole, saw the Grand Tetons and went west into Idaho. We crossed the Snake River where it had formed a deep canyon. This part of the road was dirt only and a recent rain made it very muddy and

slippery. We drove out across the fields in several places to avoid being stuck in **some** mud hole. Ahead of us a ways, we saw a large car, I believe a Cadillac, stuck in the mud. We drove off the road onto an open grassy field to continue around the stuck car. Some one hailed us to come over and help push the big car out. A couple of other cars coming along, stopped and with their help, we pushed the car out of the hole. I thought that the man that first hailed us was an Indian. I looked through the back window when the car was free and saw there a couple of big buck Indians covered over with a blanket. They sure must have had a laugh on the white man that did all the work to get their car unstuck!

I cannot place where the following incident occurred exactly but it was on a mountain pass with "switch backs" so on top one could look back-down to see the winding road. Half way up the pass, two young ladies hailed us and said they were out of gasoline and could they have a couple of gallons to get to some near-by gas station. We told them we had no siphon tube or cans but they quickly produced both items. They were cute and told us they had to get to Montana soon. We gave them about two gallons and proceeded on our way. Near the top of the pass, we parked along side the road, and looking back, we saw these girls repeating the performance they had with us. It was then I recalled smelling fresh gas in the can and siphon. Later we found out that during the depression, this was a good way to gas up without paying.

We drove south to **Pocatella**, Idaho and on to Salt Lake City. It is a beautifully laid out city, wide streets but what was impressive was to see copious amounts of water running in open gutters along the curbing. The city is built on a desert, everything that grows needs irrigation. My intestinal trouble was on a roller-coaster schedule for **sometime** but now it became severe. A road sign said "900 miles to San **Francisco**" and 2,500 miles to New York so Harold and I decided to come back east.

The trip home from Utah is hazy in my memory. I recall seeing Colorado Springs, the Garden of the Gods, and Denver. The pain in my abdomen was so bad one day in western Kansas, I stopped in to see a physician in some small town. He gave me a pill to take. I told my story and destination (Columbia Medical School) and he did not charge me. It is hard to believe that could happen today. As I mentioned earlier, we stopped in Topeka and stayed with Olive's family to recuperate. Her mother was a wonderful nurse and I thought "daughter like mother" so that if I ever married it would be like Olive. So it was, three years later. Eventually, I returned to Arlington and shortly thereafter began to feel more like myself. The spastic colitis still flared up off and on for several years more but a "nervous intestine" never left me completely. I gave the car to my father and started a new life in New York.

Period 1931-1933

Post-Doctoral Fellowship Years. On June 23, 1931 I graduated from Wisconsin with a Ph.D. degree in Zoology. My committee consisted of Dr. Frederick Hisaw, the major professor who directed my program, with several minor professors. They were in order: Dr. Walter Meek, Professor of Physiology in the Medical School; Dr. H. Bradley, Professor of Physiological Chemistry in the Medical School, the others were in the Zoology Department namely: Dr. Michael Guyer, Chairman; and Dr. L. Nolan. I should have mentioned earlier that in 1929, I filled the requirements for a M.S. degree in Zoology and was so honored. This was more or less required to determine if the candidate for the higher degree has the ability to continue. I did not attend any ceremony for this degree. However, the graduation ceremony on June 23, 1931 will never be forgotten.

It was held in a large field house, all the Ph.D. candidates and recipients of the honorary degrees sat up on the stage. All other degree candidates were on the floor below along with the families and friends in the back. Only my mother and father's sister, Aunt May Mulford, came to the affair. The temperature was unbearable (air-conditioning non-existing), a thunderstorm descended on us, the humidity awful, the speeches were long, and "soporific," and my gut was doing flip-flops. I was not only miserable but thought I would pass out. This experience made me hate commencements to this day, and I never went again except when I was practically forced to go. (That was at Union College

and later at Rutgers.) The Ph.D. candidates were "hooded" and handed their **diplomas** individually. (I learned later that those receiving professional degrees, the physicians and lawyers were disgruntled and they felt they should be treated **similarly**.) On that **same** day, the lovely girl who was to become my wife received her M.A. degree in Botany. I met Olive's parents after the ceremony, again later in the summer, and not again until 1934, except very briefly in New Orleans when I presented a scientific paper on work done while I was at Wisconsin. That was in December of 1931 at the American Association for the Advancement of Science meeting.

After graduation with diploma in hand, when I returned to my office, I found a letter stating that my doctoral thesis sent into the American Physiological Society, was accepted for publication (June 23, 1931). It was the custom at Wisconsin for Ph.D. candidates to deposit \$50 for recording one's thesis but if it was published this would allow one to get back the \$50 deposit.

In the spring of 1931, with impending graduation, the question of obtaining a job arose. The great depression was gaining momentum following the 1929 market crash and jobs were almost non-existent. I did receive an offer as an instructor in the Zoology Department of the University of Cincinnati, through the good offices of Dr. Charles Weichert, my friend and former classmate. The pay was to be \$2,500 a year, a good starting salary then. I had also applied for a National Research Council

Fellowship to continue my research in Endocrinology which was a very active field then with discoveries every month. I had to have an interview with two outstanding scientists, one at the University of Chicago; and one at Wisconsin, Dr. Leon Cole in Genetics. I have to name three scientists in my field with whom I would like to continue my research. My first choice was Dr. Philip Smith, Professor of Anatomy, College of Physicians and Surgeons, Columbia University and he accepted me. Thus for \$1,800 a year, I went to New York City to study more about the pituitary gland. Not being married this difference in income from that as an instructor was of no concern when such an opportunity presented itself. Incidentally, this stipend was cut to \$1,600 the following year.

Thus it came to pass that I lived to "eat my **words**" as I had resolved never to live or even commute to New York City as long as I lived because I so detested the environment, the noise, bustle, the dirt, and lack of greenery. The Medical School was located at 168th Street and Broadway. I rented a room with a family at 169th Street and Broadway for \$23 a month. Breakfast would cost 15 to 25 cents, lunch 25 to 35 cents, and a five course dinner, 50 cents, all within a block of the school. My work days continued as they were at Wisconsin. I did go home to visit my family in New Jersey occasionally, the subway to lower Manhattan, the Pennsylvania electric trains either at the Penn Station at 33rd Street or one at Cortland Street to Newark and then to "trolley" or bus to Arlington (cost one way, 40 cents).

During the two years on my fellowship work occupied my time exclusively. I believe I saw only 2 or 3 plays in the theater district. One play was written by my boy-hood chum Allan Scott who had just returned from England as a Rhodes Scholar. We saw each other a few times, then he moved to Hollywood to write for the movies. Sometimes I would go to a local movie. There was a **dormitory** for medical students, (Bard Hall) among the cluster of buildings forming the Medical Center where faculty, students, and myself could eat. Occasionally dances were held in Bard Hall, attended by faculty and students. I attended some, taking one of the girls who was a candidate student for a basic science degree. Prohibition was still going strong - only on the books I Across the street from the Medical Center was a store ostensibly selling soft drinks. One could go in and buy wine or "Golden Wedding Rye" presumably colored alcohol at \$2.50 a pint. It was potent. In moderation, I discovered it prevented the attacks of spastic colitis which I still had, particularly under stressful situations.

Scientifically, there were many exciting incidents but today they would not seem so but only boring to recapitulate here. Some other recollections may be of interest. One cold clear night in early spring with a full moon about 9:00 PM, I happened to be out on the street on Broadway looking up in the sky; facing south I saw two enormous dirigible balloons sailing southward in sequence. They were the Akron and the Macon. Lights from the moon and from the "gondola" playing on the silvery skin produced

a spectacular, eerie, and unforgettable sight. Both balloons came to tragic ends sometime later and the U.S. went out of the business. They were filled with helium, not hydrogen.

One week in the last of February in 1932 two members of the Anatomy Department, Dr. Samuel Detwiler and Dr. Charles Goss drove up to New Hampshire to **Detwiler's** summer home. We took plenty of food with us but shortly after we arrived it snowed hard so we could not leave as planned. Eventually, after digging out to the highway we drove back to the city only to **find** the new President Roosevelt had closed all the banks. This was particularly hard on me as I had to eat out all the time. I managed somehow but it was a very uncomfortable feeling and never forgotten to this day. It so happened I had ordered a new car, a two-door Chevrolet and on returning from this trip, I found a letter saying my car was ready to pick up and pay the \$590 for it. My money was in the Howard's Savings Bank in Newark and it was closed. I presented my situation to the bank and since I was withdrawing money to pay for an item (with proof) and not just taking money out to pocket (incase I thought the bank was folding), they let me have it plus enough to feed myself for several **weeks**.

Christmas was always a big **"to-do"** in the family and that of 1931, my first year home for the occasion in four years was very good. It was this time that my sister Ruth and I sat down and as they say "buried the hatchet" and from that time on, no more snide remarks to each other and a good relationship followed.

She died of a stroke in 1978.

The summer of 1932 was eventful in that I attended the International Physiology Congress in Rome. I went by boat, the **Miniwaska** one way, the **Minitonka** the other, both of the British-Belgium line. It took eight days; there were other steamship lines that made the trip in four and a half days. Dr. Charles Weichert went with me and shared the stateroom. It was an all one-class ship, people of moderate means, students, and professional people.

The trip was pleasant and relaxing, not boring, the best way to travel. I never was sea sick, fortunately. The food was overwhelmingly good with snacks handed out between meals. Prohibition was still the law and the ship's bar was closed until we were beyond the 12 mile limit (the end of U.S. control). People were lining up way ahead of time to get in when the bar door opened. A favorite English drink was called "Gin and It" a cocktail made with sweet Italian Vermouth - they cost just 15 cents for a large one. They were quite popular. One man on board was always waiting at the door for the bar to open each morning. I never saw him entirely sober.

Weichert and I, on a dare one evening "ate the menu through," that is all the four different entrees from which one usually chose. A bottle of wine was needed to get all the food down with much cheering from some of the passengers who stayed to see if we could. We did!, felt like to burst afterwards.

The total fare was \$180 but more was included than just boat

trip to the mainland of Europe. We landed at Southampton and I paid the train fare to London and to **Wolverhampton** to visit my mother's sister Aunt May Brown and my four first cousins and their families. Weichert stayed in London to visit his sister but I joined him later to continue our trip. We paid our way to Harwich, got on a ship to the "Hook of Holland" but this part of the trip was included on our main ticket price. The ticket was good also for the train ride to Rotterdam, Amsterdam, and as far as Hamburg, Germany. We had "stay over" privileges too, so we went sight-seeing in these cities and also made a side trip to a sea-side resort in Holland on the coast bordering the North Sea. We rented a bathing suit there for 2 cents American but the ocean was too cold to go swimming. So again we paid our fare to Berlin, Munich, Switzerland to Rome, plus an excursion to Naples and **Pompey** from Rome.

Although Holland was flat and partly below sea level, it is strikingly clean and orderly, a pleasure to see. Both here and in Hamburg, there are many canals serving as streets with "boat buses" serving the people. One day in Berlin, a young man accosted us, offering to guide us to the historical landmarks for a mark (equal to 25 cents). He was a university student, trying to make some money to stay in school. He spoke perfect English and was a great help to us. The price of everything everywhere in Europe was cheap by our standards and our dollars were much in demand. Depression was there too. One day in Berlin we decided to visit a holiday resort at a large lake (Swansee) with a white

sandy beach resembling our Jersey sea coast resorts. It was so **similar** that I remarked to **Weichert** that it was like home and soon we will see someone we know. Just then, who came by but one of my classmates, Victor Arbiter, in his third year in the Medical School in Berlin. He was of the Jewish faith, unable to enter our medical schools for reasons not academic and came to Berlin. I saw Victor again in 1937 at our tenth class reunion to learn Hitler's power forced him out of college and he never finished his studies. Vic was a good man, this thing should never had happened. We visited the famous Berlin Zoo (Tiergarten) and ate "plum cake with whipped cream." One evening in Berlin, Weichert and I were walking along a business street, looking at merchandise in the windows when a young woman carrying a "red-pocketbook" sidled up and greeted us, "Hello American boys, would you like some entertainment, very reasonable, at your place or mine." Her German accent was there, but her English quite good. By talking with her on the street we found she once plied her trade in the U.S. but she said too many amateurs were giving "it" away so she came home. All such street ladies carry red pocketbooks and have certain "street territories" to ply their trade. She informed us she could not talk long on the street. We gave her a couple of marks (50 cents) for which she thanked us and moved away.

Munich was the next stop over so we visited one of the famous "**beer** halls" to see what it was like. There was a large room with tables and chairs, an orchestra, men and women present,

and beer served in half-liter glasses by cutely dressed girls. Pretzels on the tables at all times. The band would play songs - all would sing joyously; between tunes, lots of conversation but too much for me. (Never good at **German.**) Everyone behaved as ladies and gentleman having a good time; it was a pleasant experience.

Our stop over in Switzerland was pleasant, the snow covered Alps reminded one of the Grand Teton Mountains in Wyoming. We visited the Rhone Glacier where they have carved out tunnels in the mass of ice, so that you can walk into it. Our electric train took us via long tunnels through the Alps into Italy. Here was a sudden change in the climate, - cool and temperate in Switzerland to a sub-tropical countryside as we suddenly descended on to the plains of Italy. On the way to Rome, we saw the Tower of Pisa out of the train's window.

Besides attending the scientific sessions in Rome, meeting or seeing some of the great scientists of the time, and attending banquets we made some side trips. We went to "**Ostio-lido**" a Mediterranean sea coast resort and took a dip there in, much warmer than the North Sea. We visited the summer palace of some ancient rulers east of Rome where there were beautiful terraces, gardens, statues all kept up presumably for tourists. One extended trip took us to Naples where we rode the "funicular" or cog-rail car up the side of Mount Vesuvius and walked a little away into the crater. That August day was hot but the heat from the ground in the crater on your feet came from the volcano.

Pompey was near by so we walked the streets that had been dug out of the ashes **from** the eruption long ago, exposing homes. In some, skeletons or mummies of people, dogs, food on the table just as it was when death struck many years before.

We returned to Rome to visit the "Catacombs" where Christian martyrs were buried in niches, one above the other along many underground walk-ways. It was eerie to see the skeletons in the light of wax tapers held to see our way. We visited the Forum and the **Colosseum** where gladiators once fought. The pocked marks seen on the large stone blocks are spaces left that once were filled with lead to anchor the stones but this later was removed to make lead bullets when guns were invented. From Rome we took the train to Turin, Italy and now our boat ticket paid our way to Paris and the remainder of our way home.

In Paris, we went up the Eiffel Tower, rode the subway to see the Bastille which now is just a street sign marking the place. We visited the Palace of Versailles and some of the famous buildings and places in the city. Then it was a train to LeHarve port and home. The Statue of Liberty looked **mighty** good and I believe most everyone on the ship was at the guard rail to see the Lady as we entered the harbor.

A few further thoughts on this trip comes to mind. I made this voyage as a bachelor with the feeling it would be the only trip to Europe I would ever make. It came to be true. I enjoyed Germany very much but you could feel the tension leading up to World War II. I saw an effigy of a Jew hung from a street pole.

In Italy - Mussolini was in power and his special police were on the streets beside the regular constabulary. Members who attended the Congress were invited to a group audience with the **Pope**. In the Vatican, were massive amounts of art, jewelry, and treasures and in contrast to the country at large, every where was squalor and the poorest of living conditions. Mussolini did see to it that the streets were clean, and that the trains were on time but no "street women" as it was in England, Germany, and France. The great depression was world wide, but the U.S. dollar could buy a great deal. An excellent dinner in Paris was \$1.50. I bought a summer suit in Italy for \$5 (100 lira) as I was not prepared for the sub-tropical climate of the country. We did all the museums we could in the countries visited so much so that to this day I shy away from such institutions when possible. We developed stiff or "cathedral" necks from gazing up at the many edifices in the cities. So it was, I returned home to complete the second year of my fellowship.

The depression of the "thirties" was something I hope never happens again. Beginning with the market crash of October 1929, the real trouble began gradually to increase, then to taper off beginning in 1937. Many investors in stocks committed suicide, often being ruined financially, buying on slim margins. In New York, the subway platforms were crowded with the homeless. The 168th Street station by the Medical Center was deep underground requiring an elevator to get to the street level. The temperature at the station was always more pleasant than outdoors

so many men and some women could be seen sleeping in rows on the platform close to the back wall. Newspapers were their mattresses, rags for clothes and blankets. Now, as I write this in 1990, the situation is returning where the homeless are in the subways and yet one could not say the economy is in a state of depression. Why should this be so? There are too many people, over-population; no biological checks, particularly in some groups of people, no strict control of immigration. The same laws of nature that act to maintain a given population of other animal species, apply to man, in spite of what he thinks he has - infinite wisdom to deal with this problem. The time will come when a rapid series of events will occur, the nature of which I would hate to predict but you can be sure it will be hell on earth. Even now we hear of programs being considered to inhabit other "heavenly bodies" but if possible this would be no "heaven" to be sure. Serious minded scientists rule this solution impossible.

Period 1933-1937

The post-doctoral fellowship terminated in 1933. The outlook for a job was again very bleak. My mentor, Dr. Hisaw, put me in contact with one Dr. Mavor of Union College in Schenectady, New York who offered me a position as Assistant Professor of Biology at \$2,600 a year. At this same time my good friend and colleague of graduate school days, Dr. Roland K. Meyer was leaving the Upjohn Company and his position there became open

to me at \$4,000 a year if I wanted it. It was a hard choice even though lucky to have any at that time. I had come to look favorable upon teaching and wanted to emulate two of my former teachers, Dr. Nelson at Rutgers and Dr. Hisaw at Wisconsin. There was a big difference in pay but not being married made it easier to come to a decision. I know if I went to Union College my research program would suffer with the teaching load and it did. In spite of all, I did research and published every year while at Union. Looking back, I accepted the position but was told on arrival that my salary would be \$2,400 a year as the money was not there, take it or leave it.

When I arrived at the scene in September, 1933, it was a shock to see the decrepid working environment, it was worse than I had at Rutgers, as a student. Poor old colleges do not keep up their buildings and coming from Columbia Medical College with all up-to-date facilities was very depressing. I made the most of it, my colleagues in the Biology Department and the college at large were excellent people, many were trying to do research in spite of the situation.

I had a room just walking distance to the campus with a family by the name of Newkirk, bed and breakfast (I think it was \$4.50 a week). He was a Ph.D. in physics but working only three days a week (depression). For lunch and dinner, I ate at my fraternity house which was on campus. Restaurants were a considerable distance away. Social life was practically non-existent, the work schedule was like that while in New York City.

This life style began to pall on me and I wondered how long this was going to continue. Of the five members constituting the Biology Department, one other beside myself was a bachelor, Dr. Dale. He was confirmed to this role and about 15 years my senior. All other friends on campus were married and it seemed I was ripe for the "picking." Sometimes I was invited to dinner at the home of an older professor with an eligible daughter. No appeal there.

My dilemma was solved the summer of 1934 at the close of my first year. My mentor at Wisconsin, Dr. Hisaw wrote inquiring if I would be interested in doing research for the summer in his laboratory and that he had \$150 to help defray expenses. I jumped at the opportunity. The building where I had once studied had not changed much and I felt right at home. I found a room at some fraternity house for \$2 a week and eating was no more expensive than when I was a student. After setting in, I inquired about one Olive Rees in the Botany Department and found out she was to receive her doctor's degree in a few days. I called at her office and there she was, gorgeous as ever, talking with some big handsome gentleman. We eventually got together for a few dates but one stands out.

We went dancing at a place on the shore of Lake Mendota one moonlit night in June. My lucky star shone brightly that night. I told her I loved her and wanted her for my wife. She accepted with no hesitation - knowing only what I told her of my family and their background. Meanwhile, I had been helping her getting

her doctoral thesis ready for publication and she had already negotiated a position to teach at Oak Park High School in Chicago. The question was, should she keep the position for a year at least and we could visit each other weekends at times by **commuting** on the New York Central Railroad from Schenectady. Alternately, she could resign and come back East with me. Her salary at Chicago was to be **\$2,400** a year, **same** as mine which was not too bad in the depression. I was not very enthusiastic on being separated after a marriage and neither was she so - well you know the outcome of the story. I finished my own research and published the results. I wrote to Olive's father Orton Rees requesting permission to marry Olive which he graciously gave. I wrote home to my folks explaining what was happening. They could not come to the wedding but sent their blessings on both of us. They had faith in any decision I would make. Olive then went home to prepare for the wedding set for August 26, 1934.

The wedding was at **Olive's** home. No members of my family or personal friends could come so I borrowed a man who was engaged to a girl friend of Olive's to act as best man. That day was very hot in Topeka, in the mid nineties, I am sure. The ceremony was **simple**, impressive, and I'll never forget it. Our honeymoon began in the Jay Hawk Hotel in Topeka with no air conditioning. We went back to Olive's home the next day to load up the car with our gifts and drove east for four days to introduce my wife to my family and friends in New Jersey. We visited around in Jersey for a few days and once I took Olive to see Coney Island. After

that it was back to a new life in Schenectady. I should mention Olive had a sight-pass on the Santa Fe Railroad because her father was chief chemist for the railroad. She had to give it up now and travel by car, motels, and tourist homes as a completely new way for her.

Our honey moon year at Union College in Schenectady was great. A normal social life followed among young married colleagues in Biology and other departments. We were all motivated to do research as well as going a good job of teaching. The teaching load was heavy and I spent some of my income to buy materials to keep my research going. I wonder how many young scientists would do that today if all these research grants were to suddenly disappear? Socially, we attended school dances as chaperons and faculty get together.

We made long-lasting and close friendships with three families in town, Dr. Ed and Grace Cravener, Drs. Judson and George Gilbert with their wives Jessie and Mary respectively. They are all gone, some quite early in life, but Mary still is alive. Judson was a urologist and I ran tests on my rats for diagnosis of cancer for his patients.

The nearby countryside was beautiful, not far from the Adirondacks, **Berkshires**, and the Green Mountains of Vermont. Many nearby lakes and streams provided fishing. Historic places abounded and it was a good life. The cost of living was not high, in keeping with the salary I was receiving; there were no raises until the last year at Union and that was \$200 per a year

of 10 months.

Our first home in Schenectady was a rented furnished, top floor of a two family house not far from the campus. It was called a "railroad flat"; a hallway ran the length of the house along one wall with the rooms in series similar to a railroad pullman car. We had steam heat with a coal fired furnace. That meant I had to go up and down two flights of stairs each time adjustments were required, to regulate the amount of heat needed, shovel coal, and remove the ashes for the garbage. Sometimes the fire would go out and this meant a considerable amount of work laying a new fire. It was an exasperating job to keep warm as I do recall. I also recall we had a lot of mice in the flat but a little dog we had acquired took care of that trouble. I believe our rent was \$45 per month.

In late spring of 1935 we moved into a small one bedroom unfurnished apartment, nearer to campus. It consisted of a fairly good size living room, a bedroom, bath with a shower stall, and a tiny kitchen made from a closet in the hallway. One at a time could work in the kitchen. To dry the dishes after a meal, I would stand in the hallway and reach in to help. Heat only was furnished and we paid \$35 per month. It was then we started buying furniture and things to make our home. Food was cheap (by today's standards). Bananas 3 pounds for 25 cents, leg of lamb, 19 cents a pound, bread 5 to 8 cents a loaf, ice cream cones each the size of a half a pint were 5 cents or 6 cones for a quarter. We used to buy 6 cones, put the ice cream into a

container, hurry home and put it in the refrigerator which came to about 25 cents a quart. We lived quite well.

In November of 1934, on a short visit to Arlington, we acquired a pup, a yellow mongrel with black eyes and with a lot of terrier blood in it. We obtained it through a friend of my sister Ruth and it cost us a pair of silk stockings for the owner. Olive wrapped her in a towel (it was young and the weather cold and there was no heat in the car) and carried her on her lap back home, a four and a half hour ride. It had a short tail, hence it was named "Stubby." It was as smart a dog as I had ever seen or possessed. It lived for 17 years, long enough for both David and **Patti** to appreciate Stubby. It was a female so one day with Olive's help, we spayed her. I had experience in operating on mice, rats, guinea pigs, and rabbits in my research and was also teaching comparative vertebrate anatomy so it was no big deal and we could save the cost of having it done. Later, however, I ran into trouble when applying for a dog license because I did not have an official document from a Veterinarian saying she was spayed. I offered to show the powers in charge the ovaries in a bottle which I had saved; they accepted that!

At Christmas time of 1934, Olive's parents came to visit us and we all drove to Arlington so the "in-laws" could meet for the first and only time. In the summer of 1935, we drove to Topeka where I had an operation on what I had assumed was an inguinal hernia but instead it turned out to be a lipoma, a benign fatty tumor. The surgeons fee was \$50, I forget what the hospital fees

were but I think not over \$150. It was terribly hot that summer (no air-conditioning anywhere) and I recuperated at Olive's parents home before returning to New York. We visited Topeka again in the **summer** of 1936 and 1937 as Olive's father was not well.

In 1936 we moved to a larger unfurnished upstairs apartment located near the historic part of Schenectady. These old homes are picturesque, built in early 1700 with the land in back bordering on the Mohawk River. Our next move in 1937 was to New Brunswick, New Jersey where I went as an Assistant Professor of Zoology at Rutgers University. We had now acquired more household furnishings - the maple dining room set is still in use. The old Chevrolet which I bought in 1932 was replaced by a new one so a new job and a new car happened together.

Before continuing, I would like to mention an incident at Union. Olive and I were attending a scientific lecture at the General Electric Laboratory as we sometimes did when on one occasion in 1937, the speaker was interrupted and handed a note which he read to the audience. It said that the hydrogen-filled dirigible, the German "**Vonhindenburg**" was struck by lightning as it was trying to moor at Lakehurst, New Jersey and that many passengers and crew were killed. Later, we saw this disaster at the moving pictures. This accident was a further contribution to put dirigible aircraft out of business.

Period 1937-1941

New Brunswick had not changed **much** since I graduated **from** Rutgers ten years earlier. We found a nice unfurnished apartment within easy walking distance to my office. In some ways it was like "coming home" as many of my colleagues now had been my professors previously. The chairman of the Zoology Department, Dr. **Thurlow** Nelson who guided me into the study of Zoology was responsible for my return to Rutgers. He was one of the greatest men that I ever knew, figuratively a saint. The university had grown to about 4,500 yet it was small enough that contact between faculty and students was intimate and stimulating. I could now react with other faculty members whose interests in the field of research were similar to mine. Dr. Ralph Reece in the Animal Science Department in the Agricultural College and I collaborated on several projects. It was a pleasant place to work in every way.

My salary had now increased to \$3,500 a year. It so happened that Dr. Nelson had a research field laboratory in Cape May, New Jersey on the Delaware Bay side where he conducted research on oysters, primarily during summers. During the summer, he and his family lived in a rented house on the beach, a short distance north of the laboratory. His house and two others about 150 feet apart on the beach were part of an estate along with 52 acres of land that was to be foreclosed and for sale. So it was that Dr. Nelson, Dr. Henry VanDyke (more about him later), and I purchased the estate with joint ownership and each had a

summer cottage. Each of us paid \$1,000 for his share, taxes were \$100 each per year and we had together 500 feet of a remote sandy beach to enjoy.

The cottage which was ours needed some repairs which I did some with Olive's help. It was about 130 miles from New Brunswick and easy to drive to. We had a well driven and about 30 feet down in the sandy soil we struck good cold water. However, there was considerable iodine in the water (not tasted) but potatoes boiled in it turned dark, a typical starch-iodine reaction. What always **seemed** remarkable was the fact that this well, within a stone-throw of the ocean would produce sweet water. We acquired a 14.5 foot boat, made of oak. It was extremely heavy for sea use and quite stable in rough seas. Delaware Bay is 40 miles wide at the point on the Cape and it was pleasant to see the sun set in the ocean often with beautiful clear colors. We had "riparian rights" that is, all sea bottom creatures belonged to us in front of our land, such as clams, and oysters. Fishing was great, usually we caught more than we could eat in two hours. Two species predominated, croakers which when caught made noises like a frog or toad, and weak-fish or sea trout. Small sharks and toad-fish were caught and let go. Once we caught a sea-turtle but let him return to the sea. All activities involving the sea go by the tides so we fished in the incoming or high tides only.

Living conditions in the cottage were quite primitive. There was no electricity; kerosine lamps and flash lights were

used. We bought a kerosine cook stove for the kitchen, a **simple** sheet iron stove for heating the living-dining area and there was no heat for the two bedrooms. I made a wooden walk-way to the outhouse in the back. We screened in a large porch facing east towards the woods, where it was cool in the afternoons. Olive and I had many happy times there, like "skinny dipping" late at night and observing luminescence in the water as we paddled **about.**

The land we owned together was narrow but extended quite a ways, perhaps about a mile from the highway to the beach. The soil was very sandy but grew beautiful oaks, magnolia, and holly trees. The female holly trees have the red berries and we made Christmas wreaths from the branches. We transplanted a few holly trees to our new home which we built in New Brunswick in 1940. We gave two holly trees to Olive's parents which they planted in their home in Topeka. The last time we were in Topeka these trees were about 30 feet **tall.** It was a nice quiet summer retreat but when we moved to Ithaca and World War II broke out making it impossible to use the cottage, we sold it for just what is cost us to a young Rutgers professor working in the **field** of marine biology.

One event among many at the cottage comes to mind. Now Dr. VanDyke and I were good friends before he moved to New Brunswick to do research for Squibb Company. He was also an endocrinologist and was a professor at the University of Chicago while I was a graduate student at Wisconsin. He provided me with

some growth hormone which I used in my experiments reported in my doctoral thesis. On August 31, 1939, it so happened that the **VanDykes**, Olive, and I were at our summer cottages when **VanDyke's** battery operated radio reported that Germany had invaded Poland. It was well known that England had a pact that she would declare war on Germany, if it invaded Poland. VanDyke and I made a bet, he said England would not go to war, I said she would. The next morning, VanDyke knocked on our door, having the \$1 bill I won? this began World War II.

Our life in New Brunswick was happy, we made new friends and had a good social life. Through my suggestion to Dr. VanDyke, he brought Dr. Roy Greep to New Brunswick to work with him. Roy and I were graduate students together at Wisconsin and the best of friends all these years. We now hoped to have a family but sadly our first child, a handsome boy, died at birth, December 3, 1938. Olive went through a terrible ordeal and almost died. Scars are on her body from this fiasco to this day, due to poor judgement by the doctor. On top of it, I was deeply in debt, there was no health insurance, but I got out of debt in short order by taking a second job teaching for one semester at Douglas College, then the New Jersey College for Women. It was located on the east side of New Brunswick but no trouble getting back and forth to my regular office.

It was in the Spring of 1939 that we started raising canaries mainly to help lessen the sadness we both felt. It wasn't long before we had over 50 new birds which we sold back to

the man that started us on this project. We had observed that only **male** birds sang and it happened that male hormone was then just available. The rest is history. I injected non-singers, the females, with the hormone and within a week, they all sang beautifully. I published a paper on this experiment, and many years later other investigators studying the anatomy of bird-brains reported changes in the brain structure induced by the hormone to account for my findings.

Also at this time, another friend suggested that another dog in the house might help keep our mind off our depressed feelings from our loss. So we acquired "**Skippy**" a black male cocker spaniel about a year old. They adjusted quite well quickly and we enjoyed him for many years. No doubt that Stubby was the "smarter" of the two.

Early in 1940, we decided to build a house. We bought a lot in the eastern part of New Brunswick in a new development called Dewey Heights which bordered on the College of Agriculture. We hired an architect who did an excellent job for us. Our home was the second one to be built in this new development and we moved in by September 1940 and sold it in May, 1941 to come to Cornell in Ithaca. At this time, David was on his way to be born July 2, 1941. We were not due to be in Ithaca until September, so we put our house-hold goods in storage and stayed at the home of Dr. Nelson while he was at Cape May.

The last few days before David was due to arrive we were at my folks home in Arlington. Olive's doctor was Dr. Raphael

Kurzroc, a personal friend whom I knew while I was at the Columbia Medical College. I drove Olive to the hospital at 125th Street (Harlem) returned to Arlington and returned to New York the next day. I inquired of Olive and the nurse said it was a big healthy boy. He looked like an Indian boy, dark hair. The weather during the time he was born was very hot, up to 95 degrees and I guess that is why David can take the heat to this **day!** He lives in Kansas as I write this story.

Dr. Kurzroc was not going to charge me for David, but I insisted on some fee. He said how about \$150. He said he knew I was a struggling scientist at \$3,500 a year and knew of our previous loss. He said he charged Gene Tunney \$5,000 for the birth of his son. Later we collaborated on some research projects, publishing several papers.

After about 10 days, I took Olive and David back to New Brunswick. On the way back, I stopped in Arlington to show David to his grandparents and to my mother's, Grandmother Mould, age 91. She was bed ridden, on her final illness and died in October, 1941. It was the only great-grandchild she ever saw. Driving back through all the traffic with a new son on board scared me no end. The sorrow of losing our first born son never left either Olive or I and we did not want any traffic accident to hurt David. We had a nurse for a while to look after Olive and the baby and in September we were ready to start a new life at Cornell in Ithaca.

Period 1941 -

How I came to teach at Cornell illustrates the "workings of progressing" in the college teaching profession. Here, Olive and I were in a new house built to our wishes, and had a pleasant summer cottage all to our own, with a new baby on the way and with a top-notch obstetrician to see that thing went right. The chairman of the Zoology Department at Cornell, Dr. Hutt wrote offering me an Associate Professorship (this meant tenure for the position which I did not have at Rutgers) with an increase in salary of \$500 over what Rutgers was paying me - \$3,500 a year. During the four years at Rutgers there were no raises given voluntarily. I passed the word of this offer to Dr. Nelson and then to the Dean to see what he had to say. After a while the Dean called me and said he would match the offer but he could not guarantee it would be confirmed by the Trustees. After much consulting with Olive we said "let us make a counter-offer to accept if the pay was increased by \$1,000 a year." That was acceptable to Cornell so I wrote my resignation and left. Colleges bid for the work force like at an auction and one must conduct one's life and work by playing the game by these rules. Nevertheless it was a difficult decision, my alma mater had been good to me, we were happy as we were and my family lived near by in New Jersey. Olive, God bless her, said you do what you think best and that she would stand by me without hesitation to do what I would like. She was always that way and on my part, I always loved and tried to protect her as I promised years before.

We made a trip to Ithaca prior to moving to find a place to live. We found a house on **Elmwood** Avenue, a few blocks from my office. My duties at work were not too heavy for the Fall term so that I could find my way around and get settled in. I found out that my classmate D. Roland Renne from Montana was a visiting lecturer for the Fall term and we enjoyed visiting. Then on Sunday, December 7, 1941 the news came over the radio that Pearl Harbor was bombed. This was very unsettling to me.

The year before we left New Brunswick, President Roosevelt introduced a draft decree; all males between ages 18-37 were to register for a draft into the armed forces, if needed. This was in **1940**. Our residence was within a military district with headquarters at South **Amboy**, New York, a good 12 miles away. There was a rule that anyone at age 37 with children would not be called up at first but I had sent a card to the draft board that I now had a son, this while I was still 36 years of age. So in the Spring of 1942, I was told to report to the local draft board (in Ithaca) for a physical examination to see if I was fit to be drafted. I passed and was classified 1A meaning I was all set to go to war.

Meanwhile, Cornell was in a turmoil. The armed forces needed medical doctors. There were separate Army and Navy programs for a "speed up" of medical training to produce physicians in a hurry. Since teaching Zoology is a primary course for medical studies, I was teaching Army, Navy, and civilians in separate programs as each category was different.

There were three semesters a year instead of the usual two which **meant** teaching all year with one week between terms to prepare for the next one. Then our University President Ezra Day issued a notice to the effect "if any professor is drafted, that he should notify the President's office at once or that his position would not be there when he returned." It was shortly thereafter that the South **Amboy** draft board put me in class 1A for immediate call. I always felt that South Amboy, a poor coastal town, earlier famous for "rum-running" liquor from off shore ships during prohibition, had a chance to help meet their draft quota by putting a man in 1A who now lived 300 miles away. Anyway, I went to see President Day and told him I was 37 years old with a son and this should not put me in class 1A, and that I had so informed the draft board when David was born. While I sat in the Presidents office, he phoned to the General of the Military District involved and said I was absolutely needed in the war-effort and that I had already met the age and family status not to be in 1A. Soon I received a new classification, 4A, to be called only as a last resort.

So for four years, I worked furiously with no vacation and not one cent in my pay check for the extra effort (many others made much money in other war-related jobs as is usual in war times). There was much propaganda to whip up the war spirit such as buying war bonds which we did with what little we had. (Note that when they matured years later, inflation cut their purchasing power by more than half.) Then the military wanted us

to take part in an "airplane watch." On top of Roberts Hall was a "**cupola**" a small room with windows all around and this was to be manned 24 hours a day. We had to learn the names of and recognize the profiles of all American and enemy planes and report immediately if enemy planes were observed. Sometimes I did a four-hour shift from 12:00 AM to 4:00 AM, but none to interfere with my teaching schedule. It was so ridiculous but you went along with it.

One thing upset me was the Navy **pre-medical** students had to walk the dormitory halls with rifles at night as though they were on "**watch**" aboard ship. Then they had to come to class at 8:00 AM, sometimes to take examinations. The results were obvious and I complained loud and clear and this practice was stopped. These "military" students worked very hard and were serious about their situation. College pranks and student social life was very **much** curtailed.

In spite of the war, Olive and I wished we had a house of our own since we sold a beautiful one to come to Ithaca. May of 1942 was a good time to go looking for one. Dr. Fred Hutt, who was chairman of the Zoology Department and the one who brought me to Cornell told us of a house for sale a few doors from his home. We looked at it, the price was right and the same as that we received for our New Brunswick home. We needed \$500 as a second mortgage as moving expenses had depressed our savings. Olive had already made plans to take the train to Topeka to visit her folks but that was cancelled as we needed every cent for down payment.

So we borrowed \$500 from Olive's parents and bought the house on 107 Eastwood Avenue. Later in the summer of 1942 Olive's folks came to visit and as a "house-warming **gift**" bought us several climbing rose bushes, one is still alive to this day. I paid off the second mortgage in six months, 15 years later the house was **completely** ours.

Many things were rationed and coupons were issued to purchase many items. We were allowed 5 gallons of gasoline a week, the amount determined on how far it was to the work-place. Shoes and such items as meat were coupon regulated. We were urged to have "victory gardens" so Olive and I put in a big garden in what was then a vacant lot at the corner of Cornell and Eastwood Avenue. Olive canned a large amount of food we raised. We even bought a "**piece**" of a calf and it was put out to pasture for seven months at most, then a month of fattening on corn. We ate some of our share after butchering it in the fall and canned the remainder.

Olive and I now were quite happy in our new home and David was healthy and growing fast. We thought it would be good for David to have a sibling to enjoy and since we were getting on in years this could not be put off indefinitely. Dr. Kurzroc in New York City said he would take care of Olive so Patricia Hope arrived September 29, 1943 (my Mother's birthday). This meant Olive had to take the Lehigh Valley Railroad to see Kurzroc periodically, staying over night with my folks in Arlington. The final day was hectic. Olive had to take a taxicab from Arlington

to New York City at 125th Street during the "black out" when cars could not use full head light beams at night. Olive called me about 11:00 PM September 28th. I was in bed but hurried to dress, call a cab, and just made the mid-night train to New York. I arrived at the hospital about 10:00 AM to find Patricia had arrived. It was rough going for Olive and I resolved two children are enough. After seeing Olive and our beautiful daughter then checking on David who was with my mother, I returned to Ithaca to make arrangements to get the family back home by car.

When the time came I had to apply for extra gasoline coupons but what I received was not enough and I had to resort to the "black market" for gas to make it home. (I had to pay \$1 a gallon whereas regularly it was 25 cents.) Patti needed her bottle every four hours so we stopped by the road side to warm it up in a little "canned heat" stove. It was with a sigh of relief when we got back. I should point out that we had no washing machine or dryer, no diaper service in Ithaca, and disposable diapers had not been invented. It was old fashioned diaper washing in a boiler. We wanted one but no washing machines were available because of the war. Eventually we did find a tiny table top washer just for diapers and this got us through to the end of the war. Olive's mother came east to help out, to my everlasting thanks. On November 3, 1943, I was registering students for the new term to begin in a few days when I was paged by phone in Barton Hall (the large drill hall) and Olive's mother

said to come **home** at once as Olive was bleeding to death. It is still very difficult for me to describe the "nightmare" type of situation I found Olive in but was able to get a physician to come to the house to help us. We finally got an ambulance to come to the house (the driver was drunk and got lost). Dr. Edward Hall worked on her all night and saved her life with four blood transfusions. The scary part was that Olive's **mother** had planned to go back to Topeka the next day; what if it was a day earlier? She stayed with us through the crisis. And I washed all diapers for a long, long time afterwards until Olive could take over.

Dr. Hall never sent us a bill for his services but I hope I repaid him by making pregnancy tests for him for his patients. These were for exceptional hard cases and I was the only one in town then to make such tests using the young rats in my research animal colony.

Life soon got back to war-time normal. I asked Kurzroc for the bill, he said no charge. However, I wound up buying him six rhododendron plants (for \$90) for his home in Connecticut. The war dragged on, people were "glued" to their radios, I bought a 22 caliber semi-automatic rifle with lots of ammunition, just in case. Both David and Patti were healthy, happy, and good children. Early in our marriage, we loved to take rides into the country side but we were denied this until after the war.

War eventually ceased and there was a great influx of students, many of them veterans with college tuition paid by the

government. These students were very serious concerning their studies although still boys by age were now men after their experiences. Very few failed. Housing for this student avalanche became desperate and people in town were asked to help by renting rooms to **them**. We rented at different **times**, the bedroom on the first floor, to three students, the last one, Jack Waldron who was my cousin. Jack was special to us, David and Patti loved him. He had been in the Marine Corp for the entire war and entered the School of Labor and Industrial Relations. After graduation, he eventually became Vice President for Labor Relations with the Anchor-Hocking Glass **Company** in Ohio and is now retired to Hilton Head, South Carolina.

Travel now **became** easier and no more gas rationing. Olive took the children by train to visit her parents during the summer. How she was able to do so alone can only speak for itself as to her ability to cope with David, just walking, Patti in arms and a suit case. We had a harness for David and kept him on a leash and I presume had help with porters in changing trains in Buffalo and Chicago. Fortunately, **pullman** cars were now available. I stayed at home and taught summer school and carried on my research. Usually, at the end of summer, I drove out to Topeka to bring the family home. There were many very hot days on those trips and no air-conditioning in autos.

Most of ones life is uneventful, it proceeds day by day in a normal routine and one can only recall special incidents and forgetting what happened in between. I was busy at the College

in teaching and research and in this profession one's work is never done.

The hours were 8:00 AM to 11:00 PM, with a short time out for meals. As a result I really cannot **remember** very much about my growing children, much to my dying sorrows. I loved my family dearly and worked hard so that they would never have to want for the essentials of life and later a good education for the children. A few items of interest during these years can be recalled.

I had been teaching for eight years and had not applied for a sabbatical leave from Cornell for which I was entitled. So in 1949, I applied for and received a six month leave with full pay to refresh my learning about enzymes by studying in the laboratory of Dr. James **Sumner**, a Nobel Laureate in Biochemistry here at Cornell. In addition I took a few weeks off in the late Spring that year and we all went on a visit to Florida and stayed with my Uncle David Leonard who was then about 88 years old and quite spry. He was then a widower, lived alone in Sebring in a small house bordering on a lake (he was a great sportsman and **fisherman**). The acreage about his house supported many citrus fruit trees even some banana trees. We had a wonderful visit and we also took trips to other parts of Florida to see something of the fauna and flora. One day we were looking to spot wild alligators that inhabited the many ditches and canals along the roadside. Not much luck until Patti shouted "I see one." I stopped the car and said "how do you know it was real?" She

replied "Well, it looked like a log with ruffles." And she was right, it was about seven feet long, floating in the canal.

We visited the Everglade State Park and took a small boat ride through the swamp. At the entrance to the park on the lawn were several half-grown bob cat kittens tethered to a stake. They must have been semi-tamed, I'm sure, because David patted one gently but it also gently put its teeth on David's leg just enough to make him jump away. So now David will say he was once bitten by a wildcat! At Tarpon Springs, we took a boat ride a way into the Gulf of Mexico with sponge divers on board and they showed us how they once gathered sponges using old fashioned diving suits. A disease and over-fishing had wiped out most of the catch so this largely Greek-run industry was diverted to ordinary fishing.

As I recall it was in late 1949 or 1950 that several new job offers came to me. These were to be Chairman of the Zoology Departments at the University of Pennsylvania State, Buffalo State, and Syracuse all with full professorship and with substantial raises. I let it be known that this was happening and soon I received a promotion from Cornell to full professor and a satisfactory raise in salary. I really did not want to move because Olive and I had come to like the small town life in Ithaca. I also was aware that this would no doubt be about the last offer to go elsewhere that I would ever receive. Between the ages of 45-50, you make your last move if any, and no more come after; that seems to be the way it is.

Just a few years after the war, to my good and pleasant surprise my cousin, Dr. Ellis P. Leonard, **DVM**, moved to Ithaca to become Chairman of the Small Animal Clinic in the Veterinary College of Cornell. We were now near to each other and renewed contacts were made easier. It is a good feeling to have blood-relatives nearby where our earlier youthful friendship could blossom into a sincere adult relationship. Indeed, I was his "best man" at his wedding to Alice on August 26, **1929**, a date we often celebrated together as my wedding anniversary was on the same day, five years later.

In 1946 we joined the Congregational Church which was located at the corner of Seneca and Geneva Streets. David and Patti were baptized there. Olive became active in some of the church women's groups and for six years I was secretary of the Board of Trustees. It was during my last year as a trustee that we started the plans for the new building in Cayuga Heights.

Family life, up to the time David and Patti enrolled in college, was routine but a happy time. In the mid-fifties, we decided to take up camping as an inexpensive way to have a vacation, to see the country and to do some fishing. David and I enjoyed this sport (years later he became an expert, out doing me by far). Our **first** experience was at Lewey Lake in the Adirondacks. We had a \$35 tent from Wards, a canvas tarp 6 foot by 8 foot, a Coleman lantern and stove, and sleeping bags. Our first trip out was a fiasco. It rained hard after the first night and continued all day for two days. I got wet and

discouraged and went home, fortunately only a five-hour trip but we tried it again the next year. Profiting by our experience, we came to love the life out doors and we now greatly miss our trips since our age precludes this activity.

With our camping abilities improved, in later years, we drove to Yellowstone Park and places of interest to camp on the way. Periodically, we took a motel to clean up to start again. Olive was a good sport about camping, especially after always going first class by train and hotel before marriage. Then she had a "sight pass" on the Santa Fe Railroad system as a result of her father working for the railroad as chief chemist. David took to camping like "a duck to water," Patti was non-committal but at least never complained. On another sabbatical we made a camping trip around the country to southern California, up the coast to Washington and visiting many of the parks along the way. Turning east, we visited Glacier National Park, Yellowstone, and the Black Hills of South Dakota. In all it was about 12,500 miles. The car was loaded with souvenirs, some purchased other like drying starfish, **manzanita** wood, and many rocks of different kinds as David became interested in minerals. The trip was a great educational experience for all of us and years later I found that David and Patti could remember many more details of that trip than I could.

One incident on that trip should be recorded, that happened one night in Yellowstone Park. About 4:00 AM, Olive woke me and asked if I had **gotten** up to go out and unzipped the **tent** door, I

said no, looked up and could see stars through an opening in the tent where there should be none. At the same time, I reached over to David in his sleeping bag and found it was sticky wet. I quickly grabbed my ax which I always kept beside me at night and with a flashlight, I saw a two-foot jagged hole torn in the tent siding. What happened was a bear had torn it open, put his head in and slobbered all over David's sleeping bag. This scared me no end, it might have been a grizzly and I reported the incident to the Rangers the next day. He said I had food in the tent which I did not as I was careful about that. Olive spent the next day sewing up the L-shape rip and put melted candle wax over the stitches to keep out rain. We used this tent a few times more then bought a new and better designed one which we still have to this day.

During the "growing up" years of the children were happy ones and we were all blessed with quite good health, I was working as hard as usual. We made many fast friends, particularly among my colleagues in the old Zoology Department. There was Perry and Claire Gilbert - he is noted for his studies on sharks; William and Ruth **Wimsatt** - he was a specialist in the study of bats, including vampires which he raised in his laboratory; LaMont and Anne Cole - he was an ecologist known for his work to improve the environment. The Cole's were particularly close to us, both mid-Westerners like Olive and we had lots in common. There were others but as a group just **mentioned**, we remained close the **longest**, more like extended

family. Olive was sewing for friends and made but little money but increased it by astute investments in stocks. She also was working on the genealogy of her family and of mine and obtained a tremendous amount of information. On her own ancestral line, she joined the D.A.R., **D.A.C.**, Mayflower Society, and Magna Charta Society. In some of these groups, she became an active officer. On our trips west, we stopped at many courthouses in Indiana, Ohio, and Illinois in order to trace records of her family as they moved west over the years. Later she did genealogy on my family, which were located in Northern New Jersey around Morristown. Soon David was ready for college and two years later, so was **Patti**.

David became **interested** in rocks and minerals which was an outgrowth of our trips west where many various kinds are found. We bought him a gem-cutting set and he made pieces of jewelry from cutting and polishing semi-precious stones. One summer as a project we tried to visit all possible mines in New York State. As I recall, these were iron, titanium, graphite, talc, garnet, and asbestos. We also visited an abandoned zinc mine in Northern New Jersey where he gathered such specimens that fluoresced under ultraviolet light. He had quite a collection of mineral rocks which, after he left home, are now part of our driveway. He applied for entrance to the New Mexico School of Mines at Socorro but ineptness of Ithaca High School, his transcript was never sent as requested as we found out later. Instead, he enrolled in Washburn University in Topeka where Olive had attended. Patti

followed two years later to **Washburn**. So by 1965, Olive and I were alone again, but missed our children very much. The ties of a happy family are very strong and can be.

In the summer of 1964, Olive and Patti took a trip by boat to the British Isles, Ireland, Scotland, and England. This was her graduation present ahead of time as she was to be married upon graduation from college in a church wedding and it would be easier to do for us financially. I drove them to Montreal, Canada to put them on the boat, they returned by way of New York. **Patti's** wedding to Larry Hoard was lovely on June 27, 1965. There was a reception afterwards in the Statler Hotel at Cornell for about 175 guests. I remember very little of it - the excitement was too much, I guess. I do recall how beautiful my wife and daughter looked in their dresses made by Olive in her perfectionist way.

Olive made a trip every year to Kansas to visit her parents as long as they were alive. We acquired another car for me to use while she drove out alone in the big station wagon. Olive was quite a driver, careful yes, but often made the 1,250 miles in one night and 2 days. After David graduated from college, he never returned to live with us but found work in Kansas. After Patti was married she moved about quite a bit, first to Iowa then Maryland, back to Ithaca for a year on West Hill, while Larry was in Vietnam, then to Michigan, one year at Wisconsin University in Madison and the last place, as I write, Warwick, New York.

From 1965 to 1971 I was still working and saving for a "nest

egg" for old age, now that the children were educated and on their own. Teaching under-graduate students at Cornell during these last five years was not a pleasant as it should be. Racial friction, discontent by the students for the **Vietnam** War (for which I was not in sympathy either) was not sufficient reason to disrupt classes and this I did not condone. After 30 years I had to retire as an Emeritus Professor as it was the rule for those 65 years of age. I was moved to another building for an office only for the next 18 years (from **Stimson** Hall to Emerson Hall). Then in 1989 I was moved again to an office in the new Biotechnology Building. It is very plush even carpeting on the floor of my office. It seems odd that I did my best work in quarters that were often less than mediocre, sometimes plain "nasty" and then retire to luxurious surroundings, but age and circumstances precludes an active scientific life. During the first 17 years of retirement, I did some auxiliary teaching for Dr. William **Wimsatt**, my colleague and friend. The type of research that complimented my teaching tied me down to the laboratory much like that of a dairy farmer to his animals. I had a large animal colony, mostly rats, used for teaching and research, and they required 24 hour care all year. I am a strong believer in the use of animals for research but I would not subject any of them to unnecessary stress or neglect. I felt a change in pace for my remaining years was in order and I "chose" not to become active in research anymore.

I so happened that less than a week after I retired, Olive

was stricken with **some** unknown debilitating illness with a very high persistent fever. She was in the hospital for two weeks and subjected to **many** kinds of painful tests with never a satisfactory diagnosis. Over a period of several months, her health gradually returned to normal but this episode on top of having to move quickly to new quarters across campus furthered my decision to do no more research.

With Olive's health restored and in possession of a new tent, we camped again in the West and in Acadia National Park in Maine. Our western trips now included a visit to one of my former graduate students and his wife, Dr. and Mrs. Jay Kirkpatrick who was now a professor at Eastern Montana State College at Billings. He is a great outdoor man and fed us game that he had shot previously and then took us to wonderful camping spots along excellent trout streams. We were also fond of camping in Maine and there we always visited Vincent and Helen Boucek whom we met the first time we took up camping and became fast friends. Only Helen survives in South West Harbor, Maine.

It was in the Acadia National Park camp ground that we celebrated our 50th wedding anniversary, August 26, 1984. Among our wonderful neighbors was Ted and Joan Hullar who lived next door. Joan fixed up a package for us to be opened when we set up our camp table that day for she knew we were having lobster. It turned out to be like a table cloth with lobster decorations, lobster bibs and napkins so decorated, and a small stuffed cloth lobster. It was a surprise and we had a bottle of champaign to

go with the dinner. Neighboring **campers** came around our table to see the excitement and fun. Two families of campers apparently like us so much they said they would postpone their leaving for several days and we all sat around the fire-place and talked way into the night. Patti later in the summer put on another delayed celebration which was also just the greatest!

In 1973, we decided to travel in a little more comfort so we purchased a Ford recreational vehicle, a small motor home and extended our travels to practically all of the parks in the western states not visited previously. Some incidents on these trips may be of interest. The trip to Big Bend National Park in Texas was like visiting wild America of earlier times. No habitation of any kind for the last 85 miles to the two campsites and parks on the Rio Grand River. We saw a golden eagle feeding on a dead animal by the roadside, several species of vultures, peccaries, several kinds of doves, many road runners, and many plants new to us. At one place we saw Mexican families wading the shallow river, babes in parents arms, migrating illegally into the United States. How they got to safety across the desolate wastes with no water in the heat, is a mystery. A ranger told us that remains of people were sometimes found in the desert. At one place along the river, opposite a small Mexican village, we saw a truck drive to the water's edge, loaded with metal drums. Several natives would scoop up river water in a pail to load its contents into the drums. Presumably they were replenishing the water supply to the village. We were shocked to

see one man take a drink from the pail while not more than 150 feet upstream were a dozen cattle wading in the river and doing whatever cattle do when the "spirit moves them." These natives must be tough or immune to all the "bugs" they consume in their way of life. From the Big Bend Park to Arizona was a long ride through primitive, **awesome** country with an occasional small village and historical places encountered. Fort Davis is maintained as a historical place which was once the base for U.S. Army in controlling renegade Indians, like the Apache tribes. Some of these towns were once raided and robbed by the famous Mexican bandit, Poncho Villa. There were places along the road where it crossed a dry stream bed but no bridges. It rains seldom in these regions but when it does, it causes flash floods and woe be to a car if caught in a wall of water or even cross the flooded road. In conspicuous spots by these crossings, tall poles are erected marked with numbers to indicate how deep the water is, so judgment is needed to continue on the road. The scenic views, the rock formations, and exotic plants found in the extreme southern border of the United States are well worth seeing in appropriate seasons.

Another interesting camping place is Palo Duro Canyon State Park about 30 miles south of **Amarillo**, Texas. It is off the beaten path of more popular parks. It is located in the banks of the Prairie-Dog-Town-Fork of the Red River and there one sees colorful rock formations formed by erosion by the edge of the famous "Staked Plains." A beautiful isolated campsite is located

at Portal, Arizona called Cathedral Rock (or Cave Creek Canyon) State Park. It is very isolated, beautiful, scenic, quiet, and inhabited by many humming birds and "road runners." One night, some animal made noises at the garbage can and when we investigated with a flash light we saw a "ring-tailed cat" up in a near by tree eating something. We were told that they are rarely seen. The next night it was a skunk that disturbed our sleep. The road to this camp continues up the near by mountain to 9,200 feet when there is some snow all year.

The area along the southern border of Arizona from Douglas to Tucson will offer many interesting and historic places to visit and camp and should not be passed by. To mention a few: Bisbee with the large open pit copper mine, and its famous (my favorite) Bisbee Turquoise; Tombstone is close by famous in legend and old silver mines; Chiricahua National Monument with rock formations unique compared to all other I have seen; Fort Huachuca; Nogales; and other famous places. However, a trip in these parts is not recommended for mid-summer travel. For summer, the northern Rocky Mountains is best even up into the Canadian Provinces and Glacial National Park as far as Jasper. So our travels were many and by the last look at the odometer showed we had gone **106,000** miles in the Ford camper.

With all our travels we were always glad to be home to the most wonderful neighbors anyone could ask for. To be sure there were turn-overs with sad good byes but those of the past dozen years have been extremely close as we became older and the

neighbors younger. Fred and Evelyn Greenleaf nearer our own age were always looking to our well-being but have now gone elsewhere. Douglas and Donna Green, Steve and Barbara Brown have filled the void in our hearts (speaking for Olive too) and their adorable children for **whom** we have acted as surrogate grandparents. Rebecca and Matthew Green, Miles and Randy Brown are wonderful and brightened our days. I always made or had cookies or sweets for them - they just "tickled the cockles of my heart." I am the lucky one, my love for these families knows no **bounds**.

The year 1986 was eventful but not all to my liking. The afternoon of February 22, Olive decided to drive our new Aries station wagon to town to shop. A few minutes later she was at the door visibly shaken. The car had skidded on her way down the hill (Giles Street) on "black ice." It broke off three cement pillars but the steel cables prevented her from landing in a ditch. She was not hurt but the car was wrecked. We replaced it with an Aires sedan. In August, David, who had just remarried came to visit us with his wife, Jan, and our three grandsons. David and Jan took off on a honeymoon to Maine, leaving the lads with us. The morning David and his family were to return to Kansas, Olive had her first serious heart attack and was in the hospital for 10 days in intensive care. From that time on serious heart attacks followed plus illness associated with the drugs used to control her heart and circulation.

It was in 1987, Olive had three serious heart attacks

requiring **hospitalization**. They always occurred at night. I drove her to the hospital twice with difficulty because I have no night vision. In the future, it will be by ambulance unless someone is available to help us. In May, 1987 was **my** 60th class reunion at Rutgers and **Patti** stayed with Olive in case an emergency arose and someone would be here to take charge. Fortunately nothing happened but a week later to the day after I returned from Rutgers she had her last heart attack for 1987.

The numerous drugs she is taking to control her heart and blood pressure are working as they should but the insult to the rest of her body produced by the medication is not conducive to her feelings and general well being. For my part, I have been fairly well during the last decade (1980) except for a couple of severe arthritic flare ups and the general slowing down in muscular activity and the increased need for rest characteristic of the aging process. It is exasperating to say the least, not to be able to do what you want to do but I take life a day at a time, now, and refuse to worry about the situation. First off, I hope and pray Olive will improve health wise and secondly, I hope and pray that I can stay well enough to take care of her needs and well being, the Lord willing.

Up to this point, I considered my story complete. I brought my notebook home to read to her, Thursday morning May 3, 1990 but she was feeling miserable so I put it aside. Olive had been losing weight over the past four years going from about 150 pounds to 110 pounds. Her appetite was failing and she declined

in health very rapidly from the first of April. So it was on the evening of May 3, 1990 with the help of our dear neighbors, Donna Green and Barbara Brown we took her to the hospital. Her heart had finally given out with all the attending pathology and she died May 11, 1990 at 7:10 AM.

I was notified at 7:20 AM, went to the hospital to kiss her goodbye and know she was suffering no **more**. The shock of it is hard to understand as I was well aware the last month that this would happen soon but one always lives in hopes. I did everything possible to make her **comfortable** always and to the end. Grief for the one left behind is an awful thing. I always had a pain in my stomach whenever Olive would go west on trips to Kansas but it would soon go away for I knew she would return. This time it is different, the pain is more intense and it will not go away.

It is so unfortunate that our grand children could not get to know Olive better, even as I did my grandparents when we all lived closer to one another. When David and Patti were growing up we made considerable effort to see that they visited there grandparents as much as possible. Perhaps these few pages will give later generations some idea what it was like in Olive's and my life together.

