

Except for summers spent at Great Spruce Head Island in Maine, New Mexico has been my home for over forty years. We first came to Santa Fe in _____ shortly after I made the decision to change my career from science to photography--a decision which was difficult but has been crucial for the direction of my life.

My decision to give up teaching and research in biochemical sciences for a career in photography was received by my family, associates and friends with the greatest skepticism as to its wisdom. Dr. Zinsser was especially disappointed and felt that I was making a great mistake because he still had confidence in my research ability; if I would only stick to it, he said, I would make that "breakthrough"--his expression for a significant discovery. I was not at all convinced of that and feared years of frustration working under the guidance of others for originality and inspiration. Members of my family were less concerned about my productivity, which they were not in a position to judge, than what they perceived as the wasted years of specialized education in chemistry, biology and medical sciences. To give all that up was to renounce an expensive education and ten years of dedication to science. Yet, I did not consider those years wasted; they were my past, the foundation on which my future was based. Without those experiences it would be impossible to predict what course my life would have taken, least of all that it would be in photography. In retrospect, from my

experience it appears highly desirable to order one's life in accord with inner yearnings no matter how impractical they may seem, and not to be bound to a false start by practical considerations. Nevertheless, I would not have been able to make the change, regardless of how urgent the need, had I not had the support of a sympathetic and understanding wife.

That first winter in Santa Fe was a very productive time for me with the stimulation of a different environment, a dramatic landscape and a foreign culture. And with a new group of friends the pace of life was less rigid than it had been in the academic atmosphere of Cambridge. We explored the countryside, the mountain villages and Indian pueblos, where we saw Indian dances for the first time. We visited new friends in Taos, which was a nucleus for artists in the Southwest who were attracted by common interests and a congenial society. In the spring Aline and I went on an automobile trip to Tucson and northern Arizona and later joined two friends in an expedition to Havasupai, the Indian reservation in Havsu Canyon, an offshoot of the Grand Canyon. That winter in Santa Fe I decided to apply for a Guggenheim Fellowship to photograph birds in color, a result of Paul Brook's advice that a book of bird photographs would have to be in color. I was advised by my photographer friends in Santa Fe that such a project was much too specialized to be considered by the Guggenheim Foundation, and that to receive favorable consideration an application would have to be based on a much more general theme like the photography of Weston

or Adams. Nevertheless, a year later, when we were living in Winnetka, Illinois, I was notified that my request had been granted.

We stayed in Santa Fe only that one winter, returning in May to Winnetka, where my grandmother's house, which had been occupied by my brother, Fairfield, who had since moved back to New York, was now vacant. Aline's affinities were more with Boston and Europe than mine; the Southwest was more alien to her than to me, harder for her to adjust to, and if we were eventually to live in the west permanently, she preferred to make the move more gradually. But the most immediately compelling reason for returning was that she wanted to have another baby and felt more confident about the hospitals in Illinois than in Santa Fe. Our second son, Stephen, was born on July 24, 1941.

The next winter in a small laboratory-darkroom in Chicago I experimented with making color prints from transparencies by an innovative Eastman Kodak method called Washoff Relief--the precursor of the dye-transfer process--but I first had to learn how to make separation negatives; consequently, I read everything I could find about it in publications by Eastman Kodak, in photographic magazines and in the journals of the Optical Society of America. When spring came and my Guggenheim Fellowship was announced, I drove west to Tucson to begin photographing birds, where the season begins much earlier than in Maine, and I continued that project during the summers

of 1941 and 1942 in Illinois and Maine.

Then in 1939 World War II began with Hitler's invasion of Poland, and by 1942 the United States had become involved with the Japanese attack on Pearl Harbor. We heard the news on the radio Sunday morning, and in that one moment all my plans for the coming year became meaningless. I knew that photographing birds during war time would be an impossible pursuit but thought that my knowledge of photography might be of some use in the war effort, and with this hope I tried to enlist in the Air Force as a photographer. I went to Washington, where my brother-in-law held an influential position in the government, to ask his help. Although he pulled strings and arranged interviews for me and my enlistment application was accepted, in the end I was rejected, ostensibly for minor physical reasons but more likely because of my age. Then that summer my Harvard classmate Francis Birch, a geophysicist at Harvard with whom I had shared a hobo adventure in 1924, arranged a position for me at the Radiation Laboratory in M.I.T. because of my research experience. The Radiation Laboratory was a war time establishment for the development of military radar for air raid detection and naval operations. We moved back to Cambridge, where for two years my job was to schedule work in the machine shops for the engineers and scientists in my division. I resigned from the Radiation Laboratory as the war in Europe was drawing to a close and returned to Winnetka but not to my grandmother's house, which was rented. Following the surrender of Germany we went to our island in Maine and in July, 1944 the first atomic bomb was

exploded over Hiroshima. For two more years we lived in Winnetka. My father died in the first summer and mother a year later, and since neither my sister, brothers or I wanted to live in the family houses on the lake front, they were sold.

Aline had agreed to move back to New Mexico, so in 1945 I drove out to Santa Fe to look for a house for my family. Since it was soon after the end of the war, many places were for sale, one of which belonged to friends from our first year in Santa Fe--Ernest and Gina Knee, a photographer and a painter. The house was in the rural community of Tesuque, a few miles north of Santa Fe, which appealed to me especially without, however, considering that this situation would mean that driving our children to school would become a routine responsibility. The house was well constructed and the right size for us, with a studio for Aline and a small darkroom for me, but it was in need of much repair and had been rented until the following year. The price, however, which included some of the Knee's furniture, was very reasonable, and I was able to have the most critical repair work done during the next year.

It was during this year, also, that our third son, Patrick, was born--in February, 1946.

We drove out to Santa Fe in July, 1946 with Jonathan and Steve, leaving Patrick to be brought out by train as soon as we were settled in our new house; he was too young to be subjected to the long motor trip, which ^{before the} ~~in those~~ days ~~before there~~ ^{it} ~~were~~ interstate highways took more than a week. The children were very excited at the prospect of going west; Jonathan probably remembers very little of his first winter in Santa Fe but to

Stephen, who knew nothing about the wild west, it was a great adventure. Expectations were very high. When we crossed the border into New Mexico, we stopped by the roadside to let the boys release their pent-up excitement, and they ran about like colts first out to pasture. They romped and scampered all over the place with an exuberance that confirmed the wisdom of our decision to come west.

Our new house was situated on the west side of a fourteen-acre plot of land across which ran the Tesuque village irrigation ditch not more than one hundred feet west of the house. Cottonwood trees and Chinese elms had been planted along the ditch to provide afternoon shade to the house in summer, and below the ditch in a two-acre orchard, cherry, apple and pear trees had survived four years of neglect during the war. The house was roughly H-shaped with the living room in the middle, three bedrooms and two baths on the south side, and a large studio, hall, dining room and kitchen on the north side. A store room and small darkroom opened off the east side of the kitchen and beyond that was a large workshop with only an outside entrance. There was also a two car garage, which was a separate building from the house. Soon after we had arrived our furniture came in a van from Illinois, and after we were settled in, Pat, who was six months old, was brought out by train. In addition to being a noted photographer, Ernest Knee was a skilled craftsman and carpenter. He had done most of the carpentry ~~for~~ himself, including many beautifully paneled doors, mullioned windows,

and corbeled vigas.

The Knees had no children, and we soon began to appreciate the difference between their requirements and ours. One of the first changes we made was to remove the partition between the store room and darkroom in order to make one large pantry and utility room. I needed a darkroom, so I built a larger one more suitable to my purpose as a separate structure attached to the garage. Carpentry and furniture making was an activity I had enjoyed since childhood, and over the years I had acquired an adequate supply of hand and power tools. The workshop was, therefore, a very useful feature of the house. Eventually, however, the workshop was converted into bedrooms and a bath for the children, with an entrance through the utility room off the kitchen. For a workshop I closed in the garage, added a concrete floor and brought in electric power. A new garage was built later. At first I shared the studio with Aline, but that arrangement proved impractical for a painter and a photographer, a situation which was remedied by building a studio of my own attached to the darkroom. These building projects and re-novations were not done all at once but were carried out over a period of years as the need for them became apparent.

There was one requirement of a different kind that had to be met very early--the matter of transportation. The station wagon in which we drove west had to be available to Aline at all times, and I needed a vehicle for photographic purposes. I learned that the Federal government was selling off army field ambulances, preferentially to veterans. My sister's brother-in-

law, who was a veteran, obtained one for me that was practically new and very cheap. The standard ambulances were four-cylinder, four-wheel-drive Dodge trucks with rear doors. I fixed it up with two folding bunks, a gas stove, sink, water tank and storage cupboards. I also made it possible to use as a darkroom. I could go almost anywhere in this vehicle on photographic trips and live in it quite comfortably. After the war my Guggenheim Fellowship had been renewed so that during the spring and early summer months I devoted myself almost exclusively to photographing birds in New Mexico, where many of the species, especially those high in the mountains, were new to me. I also went on birding expeditions to south Texas on the Rio Grande, to Michigan and Minnesota, and to the Chiricauha Mountains in southeastern Arizona.

Inspired by the New Mexico environment, I became interested in photographing other forms of biological life, in particular reptiles, spiders and insects. Jonathan and Stephen were fascinated by the abundance of wildlife around our house and would capture lizards for me to photograph, of which fence lizards, race runners and horned toads were the commonest species. I photographed them in natural settings, but because they were always very active and hard to control, I would cool them off in the ice box before placing them in an appropriate position, and as they warmed up and again became alert, I would photograph them before they dashed off. Snakes of a number of kinds were not uncommon where we lived; bull snakes were the most docile and could be easily handled because they liked the warmth of the human body. For several years Jonathan kept a bull snake, which

he carried around with him under his shirt. Although we never saw rattlesnakes at the 7,000 foot altitude of Santa Fe, they could be found in the Rio Grande canyon west of us. Bull snakes had to be fed on mice, which were easier to raise than to trap--not the most pleasant aspect of keeping a pet snake.

The most favorable time to photograph spiders and insects was late summer when they were most abundant. The best way was to photograph captured individuals in my studio with controlled illumination and in natural environments brought in from outdoors, which was not difficult to do because of the small size of the subjects. My children brought me all the strange creatures they found--strange to them and some even strange to me--from grasshoppers, katydids, beetles and wolf spiders to praying mantises. I particularly wanted to photograph tree crickets stridulating. They are the insects that produce the buzzing sounds at night, from ^{the} ~~whose~~ frequency ^{or which} one can estimate the ambient temperature. Jonathan and Steve were able to capture tree crickets for me, and I set up late into the night with a recalcitrant individual perched on an elm tree branch in front of my camera with flash lamps set for the moment it should be inspired to do its stuff. After a long wait it raised its wings vertically above its back and began to rub them together, revealing its stridulation technique, which varies from species to species of the orthoptera, some of which do it with their legs.

From time to time I raised spiders in my studio in order to photograph them. One black widow I raised fabricated two egg sacs in quick succession without becoming as greatly depleted

as might be supposed. During the night the eggs in one of the cases hatched, and on entering my studio in the morning I discovered a sheet of fine silk fibers extending from the cage to the ceiling. Clinging to this veil of finest gossamer from top to bottom were hundreds, myriads it seemed, of minute, pale brown spiderlings. They were all in motion, creeping slowly along the nearly invisible fibers. How they had ballooned the silk to the ceiling in the still air of the studio remains a mystery, but true to instinct they had deserted the guardianship of their mother, who once they acquired an active independence might have eaten them. I knew not how to cope with this multitude of newly born spiders, how to transfer them outdoors. The task was not complicated by risk of being bitten, since immature black widows are not venomous, but any means of intervention was made impossible by their sheer numbers and smallness. So I left my studio door open, and inadvertently the glass top of the cage, when I had to leave on other business. On returning in an hour or two I found to my great relief that all the young spiders had vanished and with them, unfortunately, their mother.

When our children were older I took them on camping trips around the Four Corner states--to the Grand Canyon, to the national parks in southern Utah (Zion and Bryce) and to the San Juan Mountains in southern Colorado. The ghost towns of Silverton and Ouray, which were slowly being abandoned, had been the centers for extensive mining in the San Juans. The many deserted mines there were an attraction to me as a photographer and to the boys for souvenir collecting. We camped in some of the deserted

mine buildings and drove on old mining roads to the most remote mines. Some of these appeared to have been abandoned on short notice, since the machinery was still in working condition. One of the longer camping trips I took with the boys was to Yellowstone National Park. The most spectacular phenomena of the park--the geysers, hot springs and mud pots--did not excite the boys as much as the black bears, which we encountered everywhere begging for hand outs and upsetting trash cans, fearless but not tame, and not to be trusted--a situation I had to impress on the boys. The bears often came into the camp sites at night foraging for food and would make a great racket knocking about a food container that had been inadvertently left out, trying to break it open. I always had the boys sleep in the truck while I slept in a tent beside our campfire. One night in a crowded camp site, when several bears were making a tremendous commotion with trash barrels while the campers were banging on tin pans to frighten them away, a lone bear stuck his nose in my face as I was lying with my head near the open flap of the tent. I hit him, shouting to drive him away and was thankful that the boys were in the truck where they slept through it all.

A few years after moving to SantaFe I realized that I needed a more maneuverable vehicle for bird photography to get me and my increasingly elaborate equipment into the roughest terrain. For this purpose I purchased a universal Jeep with a canvas top, the civilian counterpart to the original military Jeep. The price was \$1400 and in this vehicle I was able to drive across country and high into the mountains in search of the

more uncommon and elusive birds. I also took the Jeep on some of the camping expeditions with my children and their friends by towing it behind the ambulance. On one such camping trip to the San Juan Mountains I drove the Jeep to the top of Engineer Mountain, a barren peak beyond the capability of a larger vehicle, and to Stoney Pass between the Rio Grande and the San Juan River watersheds. On another of these expeditions, while I was photographing the abandoned Highland Mary Mine, Jonathan and his cousin, David, were searching the mine buildings for souvenirs and discovered a case of dynamite, which they carried out and put in the Jeep to use for some illconceived purpose. When I discovered it shortly thereafter, I was horrified and made them put it back, much to their chagrin and disappointment, since they considered the find a great treasure.

Some summers we went to Maine, to Great Spruce Head Island, which to our youngest child was the epitome of Maine. On one occasion Aline went by train with Pat and I drove east with Steve and Jonathan in the ambulance. With us we had a little black dog named "Inky" that we could not, of course, leave behind; in addition, we had an assortment of other pets, including Jonathan's bull snake "Nosey," as well as, I believe, a hamster or two. In the Midwest we saw many box turtles crossing the road as though on a mysterious migration, and we picked one up. The top speed of the ambulance was 45 mph so that we were constantly being passed by all passenger cars. The boys could ride in front with me but usually preferred to be in the back where they could play or lie on the bunks. I began to notice while driving

through the plains states that the people in the cars passing us were often laughing, and I wondered what was so amusing, thinking it might be the ambulance; then I discovered that as the cars approached, Jonathan and Steve were holding the pets up to the rear window one at a time to show the people in the passing cars. We stopped one night at a motel near Cincinnati and took Inky in with us to feed him, leaving him in our room while we went to the restaurant for supper. We had not gone far when we heard the most distressful, heartbroken, anguished sounds coming from our room and on returning found Inky trying to claw his way through the venetian blinds. He must have thought we had deserted him in that strange environment. We put him in the truck where he was perfectly happy while we had our supper. Once in Maine, we had barely settled in when Nosey, the bull snake, escaped. Jonathan was very distressed, but we knew he would not starve. On the day before we were to leave, Nosey was discovered under one of the apple trees, having grown considerably on a diet of moles, which are abundant on Maine islands. He was the first and only bull snake that had ever enjoyed such a salubrious summer on a Maine island, where his only relatives were the green and brown meadow snakes. Jonathan brought him back to his native land, where he would not have to contend with the hardships of a New England winter.