

CHAPTER THREE: FROM HIGHLANDS TO WORLD WAR II

After a long courtship, Dr. Coker had married his former secretary, Louise Venable, in the fall of 1934. Until the 1950's when Dr. Coker was no longer able to travel, they used to spend several months each summer at Highlands in his rustic log cottage that overlooked Lake Ravenal. On the opposite side stood the little laboratory building of the Highlands Biological Station. It was here that professors and often some of their graduate students came for a brief time each summer to pursue their research on the flora and fauna of the region. The Station was a one story flat-roofed building with a large workroom, from the north side of which opened a row of small separate cubby-holes, each with an outside window. These were the cubicles in which the researchers did their work when they were not in the field. Dr. Coker had a couple of these little rooms where he spent many hours studying and describing the fungi of the region. Every year he and his wife Louise drove up to the cottage to escape the summer heat (whoever heard of air conditioning in those days!), and were joined a little later by Dr. Coker's secretary, Alma Beers. She was his indispensable right hand.

For some reason she could not go up for the first few weeks in the summer of 1936, so Dr. Coker asked me in her place. Of course I was delighted, though a little appalled at what he expected of me. As I wrote my parents - "He wants me to...take pictures of fungi, flowers, and shrubs! Heavens! He knows I have never done any photographic work, but he feels confident that I can learn enough before we go to be able to use a plate camera!" The Graflex he had ordered arrived shortly before we were to leave for the mountains, so my introductory course in photography was very brief and concentrated indeed. It also included a short session on learning to develop plates and make prints.

Things went along very well that summer at Highlands in spite of a few problems, such as how to build a support for the heavy camera so that mushrooms could be photographed from above, at various levels. The minor inconvenience of no running water in the tiny darkroom was solved by my simply lugging it over by the pailful from the cottage, a quarter mile away. Naturally, the first few prints were dismal failures, but by the end of my stay, Dr. Coker seemed quite pleased with the results.

It was indeed a pleasant summer for me. My little room upstairs in the Coker's cottage had a tiny window from which I could look out into the cool hemlock forest. Early mornings I was free to roam the woods and meadows, to study birds or to collect plants for the herbarium. Then came breakfast with the Cokers, always a pleasant time. Meals were prepared for the most part at the "Big House" by Mrs. Potts, who was a renowned cook, and brought over by her daughter Caroline who stayed to clean up afterwards and do some housework. With Mrs. Coker's careful planning and daily shopping for choice fruits and vegetables, and Mrs. Potts's excellent cooking, meals at Highlands were always

a delightful and delicious interlude. Frequently they were shared by an interesting guest, with lots of good conversation.

Dr. Coker and I worked at the lab several hours each morning and afternoon, and the longer I worked with him the more careful and accurate I found him to be. He was always thoughtful and considerate, with a nice sense of humor. He always had the ability to cut through all sorts of extraneous material and go directly to the heart of a problem. Before starting on a new study or project, he always cleared his desk of everything. He would often say that "you need to start with a clear desk and a clear head."

Dr. Coker's constant companion day and night was a little one-man dog named Mickey (and I mean "one-man") who looked just like the little dog in "His Master's Voice", the famous Victrola trademark. Many mornings the Cokers, Mickey, and I walked the pleasant trails around Highlands in search of mushrooms and other plants for study. On longer trips by car, sometimes over a day or two, Mickey of course always went along. The Cokers sat up front and took turns driving while I sat in the back and made certain the little creature was on leash before a door was opened. I still keenly remember the day I fell from grace. We had just returned to Highlands after a wonderful day of collecting mushrooms. The Cokers stopped as usual at the post office to get their mail, Mrs. Coker opened the front door and before I could get hold of Mickey he sprang over the front seat, shot past the partially opened door and disappeared downtown. To me it seemed like a long afternoon at the little cottage, without much conversation. Finally, the little rascal walked in without apology, hungry and tired and ready for supper. He ate, then lay down at his master's feet for a long nap, full of dreams no doubt, about his cleverness in escaping from me for a rare afternoon of forbidden freedom and adventure.

Our trips that summer included interesting and beautiful places like the Great Smoky Mountains, Gatlinburg, Maryville, Mt. Pisgah, the Pink Beds, Coweeta, Wayah Bald, and Standing Indian. Most were new to me and very exciting. From all these trips I brought back ferns and flowering plants for the herbarium at Chapel Hill.

Highland's frequent rains kept the climate cool but rather damp, so that drying specimens and keeping them dry was a real problem. The mushroom drier, just a sieve of heavy wire over electric light bulbs, was of no use for higher plants. There was no fan to circulate the heat or carry off the damp air. My attempts to use it for drying my presses of seed plants resulted in darkened, moldy disasters. Dr. Coker's memories of these ruined specimens nearly stymied future plans for a much-needed drier for the herbarium at the University ... more about that later. I solved the problem at hand that summer, thanks to some workman who had left a ladder leaning against the laboratory building. I carried armloads of damp blotters up to the flat roof and spread them out in the sun (when there was sun). A few hours later I took down dry and almost hot blotters which I immediately exchanged for the damp ones on the plants. In this way I was able to take back to Chapel Hill a large

collection of nicely dried specimens of good color. One could not call this method very cost-efficient, but it did produce quite satisfactory results.

Upon returning to Chapel Hill, I spent a month getting everything ready for fall, taking inventory of supplies, and checking over Dr. Harbison's material. His plants were in fine condition and it was a real pleasure to work with them. In November I paid a visit to the National Herbarium in Washington to see how our methods compared with those of a well-established herbarium, and came away feeling that in general we were quite up-to-date here in Chapel Hill. Later I visited the Gray Herbarium, The New York Botanical Garden, and the Arnold Arboretum for more ideas on improving our own program. It had been a busy and a productive year.

The next two years (1937-38) saw growth and change in both the curator and the herbarium. In June of '37 I received my master's degree in botany (under Dr. Coker) and at last could devote my whole time to managing and developing the herbarium. Most of my workers were botany students who, although usually majoring in fungi, at least knew which end of a plant was up and could spot gross errors in identification. They shared my enthusiasm for keeping the herbarium neat and attractive, and worked diligently on assigned tasks, so that by the end of the first year much had been accomplished.

The poisoning of the entire unmounted Harbison collection of some 12,000 specimens was finally completed. (That method of dipping pressed dried plants into a mixture of alcohol and mercuric chloride, a deadly poison to protect against insect damage, has long since been replaced by methods safer to human beings as well as to plant color, etc.) Three badly needed new cases necessitated the shifting of the entire herbarium to make room for a huge backlog of mounted Ashe material that had been stored on shelves, awaiting space in the proper cases. This shifting was a horrendous and time-consuming task, but it gave us the opportunity to catch numerous filing errors, locate specimens in need of repair, replace old brittle folders with fresh new ones, and identify and correctly file a great number of unnamed specimens that had been stuck into the wrong places.

Among the many changes that improved the appearance of the herbarium, probably the most satisfying to me was removing to the back (and out of sight!) all pressing, poisoning, and mounting activities. For years, all this had been carried out right up front on a large work table directly in front of my office door. Now visitors entering the herbarium would see a neat row of cases, each numbered in legible Arabic numerals (no more confusing XXVI with XXIV), a plant family chart keyed to the case numbers, and a visitor's work table equipped with reading lamp and comfortable chair. All blotters, newspapers, and other materials we cleared out of the little office up front and moved to shelves in the back work area. At last I had a neat place in which to set up "housekeeping" with my desk, typewriter, books, etc. There was still much to be done, but the herbarium was beginning to assume the appearance of a legitimate institution. (Incidentally, my decision to change the numbering of the herbarium cases from Roman to Arabic was the result of an incident

that had embarrassed Dr. Coker when trying to show a visitor how easily a plant family could be located in the file by first looking it up on the wall chart. Trouble was, he wanted file XXIV, but mistakenly went to file XXVI. Didn't work.)

As more and more botanists came to visit and study, and as we began to receive more requests to borrow our specimens, I realized we had to begin numbering our sheets. When Dr. Blomquist from Duke, for example, borrowed some 300 sheets of grass specimens, many were without collector or sheet numbers. What fun to copy 300 labels for our records! So I ordered a numbering machine and designed an herbarium stamp to use with it. A long, long time --- years in fact, would be required to bring the sheets up to date, but at least we had made a start.

The year 1938 seemed a good time to take stock of what we had accomplished and to set some long term goals. Dr. Coker was very much interested in what was being done each day in the herbarium. Hardly a morning passed that he did not stop by my office. He would stand in the doorway, gently rocking back on his heels, thumbs hooked under his suspender straps, and peering over his half glasses with that little grin and a with a twinkle in his eye, ask, "What's new?" I nearly always had something to show him or tell him about our work that seemed to please him. So I decided to present him with an itemized account of our accomplishments and an estimate of the number of specimens in the herbarium to date. As far as I can determine, this was the first written report of the work of the herbarium in its thirty-five years of existence, and the forerunner of the annual reports that have continued to the present. The original barely covered two pages, quite a contrast, for instance, to the 1983-84 report of some thirty pages.

The following are a few of the items contained in that first report:

- 490 specimens borrowed by us
- 400 specimens borrowed by us
- 202 exchanges sent out
- 818 exchanges received
- 7,000 plants poisoned
- 5,700 plants mounted
- 5,000 plants filed
- 800 collected for exchange
- 2,300 local collections (1938)

Approximate number of specimens in the herbarium:

Vascular plants.....	53,300
Fung.....	20,000
Others.....	<u>3,355</u>
Total	76,655

Other changes made in 1937-38: Three new cases added; entire herbarium shifted to increase filing space; all cases renumbered in Arabic; office rearranged; eight new families added, and 96 families put in good order (genera and species arranged alphabetically, labels checked, repairs made, folders divided as needed, old ones replaced with new, etc.)

Early in 1939 I wrote home: "...if I had a car I would stay down here for about three weeks in June and study the plants of the coastal region. I know so little about anything except the mountain plants." Never did I dream that in less than ten months I would have the use of a car for field trips and collecting. Until then I would have to walk, so I took three of my herbarium assistants and we walked four miles to the site of a new lake, the present Eastwood Lake. We filled four vascula with the plants that would soon have been bulldozed away, and lugged them back the four miles to Davie Hall. They would make fine exchange material. We had to take every opportunity to get good specimens to send out, since we were now exchanging with an increasing number of institutions

Summer at Highlands that year was a little different. The usual quiet was broken when the lab was overrun for a week by a class of twelve students from Furman University, brought there by Dr. Ives and his assistant, Albert Radford. I knew that the latter was coming to Chapel Hill in the fall as a new graduate student in botany, and that he would most likely be assisting me in the herbarium. It had been reported that he was quite good in taxonomy. So I looked him over rather critically. He was very quiet, worked hard, and seemed really interested in botany. I decided he would probably be a very useful addition to our work force. I really needed someone to work with me on identifying and double-checking those hundreds of unnamed specimens.

The first day back on the job in September, I found my newest assistant already there ahead of me, checking out the herbarium. Before I could tell him I was going to put him to work on the backlog of unidentified specimens, he let me know that he had no interest in gluing plants to paper - that would be a waste of his time. All he wanted to do was to identify plants. A bit miffed, to say the least, at being told how to run the herbarium, I nevertheless held my tongue. I needed an "identifier", not another "gluer"; some day I would set him straight. Come to think of it, many years later he has yet to mount his first plant.....

In a short time it became apparent that my newest assistant was right - it would be a waste of his time and taxonomic knowledge to put him to pressing, poisoning and mounting. I really needed someone to work with me on checking and identifying those hundreds of unnamed specimens.

We soon decided there needed to be a checklist of Orange County plants, so we set aside Thursday mornings for those field trips. After the first one, I wrote to my folks, "We struck out through marshes, bogs, over meadows, up hills and down dales, through thick

woods, tangles, brambles, etc. " This description doubtless would still have a familiar ring to many of Mr. Radford's students down through the years.

That fall we tramped many a dusty mile over Orange County for our checklist and spent countless hours pressing and identifying our finds. Few students in those pre-World War II days had cars, but occasionally we were fortunate enough to catch a ride out of the county so we could collect farther afield, and bring back new plants for the herbarium and exchange. We also spent long hours identifying unnamed herbarium specimens and filing them into their proper places. By Christmas vacation, we had added 400 specimens from Orange County, identified more than 700 sheets of grasses, sedges, and violets, as well as 280 specimens for Virginia Polytechnic Institution and the University of Georgia. Also we had added 57 more plant families to the 96 that had been put in good shape the year before. The rest of the staff had worked hard, too, poisoning, mounting, and filing around 4,000 specimens.

We had talked with Dr. Coker about starting a shrub garden which could eventually display most of the native shrubs of North Carolina. In January, 1940, he surprised us by making available to the herbarium and for our use a second-hand Model A Ford coupe. It had originally belonged to Dean Hobbs, then to Miss Holland for a time. Dr. Coker had just given her a new Buick for Christmas, in lieu of the well-deserved raise he was unable to get for her from the University. Now the little car was ours to use for collecting. My wish had come true!

Dr. Coker gave us \$55 which was left over from some previous account, and could hardly wait for the snow to melt before sending us out on our first collecting trip. He soon had a little trailer made so we could begin bringing in plants for the shrub garden. By June 2nd we had traveled 2,400 miles and spent only \$43.97 for gas, oil, and repairs. We had made 19 trips, some as far away as Wilmington and Myrtle Beach, and had brought in and planted 60 shrubs, and added some 3,900 specimens to the herbarium. By the end of the year that number had been increased to 6,000 specimens, from the mountains to the coasts of both Carolinas.

According to the annual report for 1940: "This fall the herbarium storage and work space was considerably enlarged by the removal of a wall between the herbarium and an adjoining laboratory. A much better lighted and more attractive arrangement of cases and working space was thus made possible. The herbarium now occupies the entire second floor of the back wing of Davie Hall." All the walls were repainted, the floors rewaxed, and six new cases installed, making 47 in all.

Thus began 1941, with the now familiar process of shifting the folders into the new cases to relieve overcrowding and make room for new collections. Again this was a time to mend,

tape, rewrite some of the labels, number and stamp each sheet as we went along. We were gradually getting everything into shape.

With all the collecting we simply had to have a good drier. The old method for many years was simply to lay blotters out to dry on Davie Hall's wide stone steps, where students perched during breaks and accidentally burned holes in them with their cigarettes or walked on them with their dusty shoes. The dried blotters were then put on the plants and weighted down with a board topped by an enormous crock filled with sand... This was simply ridiculous as well as back-braking. We had to have an efficient drier. Dr. Coker still remembered those blackened, moldy plants that resulted from my trying to use the mushroom drier at Highlands. Up to now he had enthusiastically supported any new ideas we had for improving working conditions or methods. This time it was clear the subject was closed, period.

But we still had to have a drier! Dr. Totten understood our predicament. He told us to go ahead and build one and he would work it out with Dr. Coker. For several days we struggled with remodeling a tall narrow glass-doored cabinet, fitting it with cross supports which Albert sawed out of thick oak boards with a very dull handsaw. The only place to work was in the dirt-floored basement, illuminated only by a single naked light bulb. We finally had the "thing" brought upstairs and put into the workroom. After more sawing and nailing, it stood steady and received a couple coats of varnish. It didn't look half bad, and when lamps were put into the bottom, it worked very well even without a fan. Plants came out with such bright colors that Dr. Coker was quite pleased. Apparently Dr. Totten had explained it to his satisfaction, for he never mentioned the "thing" to us. Later on, he even had the Buildings Department make us a very nice box, complete with lights and a fan.

That was the year we finally took everything down from the tops of the cases, at long last. Since the North Carolina Academy of Science was meeting in Davie Hall in the spring, Albert and I wanted the herbarium to look its best. We framed and hung flower paintings around the walls (75 cent frames from Woolworth's, some still in use today), put out an herbarium guest book, and transplanted more insectivorous plants from the greenhouse into our terrarium in the front lobby. Mr. Henry Wright of Highlands sent down a *Shortia* plant for the occasion and it bloomed nicely for the meetings.

The war clouds that were hanging heavy and dark over Europe were beginning to spread across the Atlantic. Though the possibility of our country's becoming involved still seemed remote, and life went on about as usual here, there was a feeling of uncertainty and apprehension in the air. That fall we invited my mother to accompany us on a collecting trip to Roanoke Island, by way of Lake Mattamuskeet. For a stretch of 36 miles on a lonely dirt road through the wilderness of Hyde County, we saw only one sign of human habitation. For several days we never saw a newspaper or heard a radio. There

was only peace and quiet and no war news, just flowers everywhere. Nearly every plant we collected was something none of us had ever seen before. My mother felt well repaid at last for her efforts of long ago to interest me in botany.

In July 1941 Albert was called into the Army and sent to Ft. Belvoir, Virginia for basic training in the Engineer Combat Corps. For the next four years he would have little time to think about botany. In October he came to Chapel Hill on a furlough, and we were married on the 10th. Then we saw each other only a few times until the next summer when he was sent to Texas to train with a newly formed Engineer Combat Battalion. It seemed likely that he would be in the States for several months, so I asked for a short leave of absence from the herbarium in order to be with him. The few month's leave became 15 months, and finally he was shipped overseas the last of October 1943. It would be two years almost to the day before we would see each other again. I took our four month old son David and went back to Wilkes County to stay with my parents. They needed me - and I needed them. There was no one to help them with farm or orchard. Young men were leaving schools, factories, offices, and farms by the thousands to join the Armed Forces. Thousands more were being called up by the draft.

It was hard to leave the herbarium. I had become very attached to it and its needs. I had accepted the challenge to bring some order out of its great disorder, mainly the result of the sudden accumulation of some 35,000 specimens from the Ashe and Harbison herbaria, crowded into a space too small and in need of much attention. Those had been such happy years, full of learning and personal growth, new experiences, good friendships, and most of all a gratifying sense of accomplishment. I recalled some of our accomplishments: most of the Ashe and Harbison collections had been processed and filed; all those bundles, gathering dust for years, had been taken down from the tops of the cases and cared for; a good start had been made toward putting the cases in order; a drier that worked had been built; herbarium cases had been increased to 47 and now occupied the entire second floor back wing of Davie Hall; an efficient workroom had been set up at the back and a neat office in the front. Botanists were coming from many places to study in our herbarium. Exchange of specimens with other institutions was on the increase, as well as loans back and forth. Many specimens were being added each year by our own staff. For example, in the short time that Albert had worked there, he and I collected around 11,000 specimens. The herbarium had grown from 74,000 specimens in 1935 to close to 100,000 by the time I left in 1942. My assistants had been hard-working and enthusiastic, and together we had changed many things for the better. The herbarium had become a well-established and respected institution. We could be proud. The work of the herbarium would slow down and most of our projects would be put on hold. Our nation was at war, and there were more important things to attend to now. The herbarium would have to wait. It was in good shape.

In late June of 1942, I had left the herbarium in the very capable hands of "little Miss Wicker", as Dr. Coker called the undergraduate student from Pinehurst, N.C. who had

begun work for me in April. She proved to be one of the most dependable assistants I ever had. As I wrote Dr. Coker that fall when I asked for an extension of my temporary leave, "Eloise Wicker has assisted me in practically every phase of the work...I am sure you have heard me say many times that she has shown more self-reliance, initiative, and intelligence than some of the best graduate girls I have had." It was a great relief to me to have her in charge of the new assistants, for I knew she would train them correctly and see that the work of the herbarium was done right. Two years later, in August, 1944, Dr. Coker wrote me that "Eloise is not coming back. Her brother is reported missing over Belgium, and she is going to stay with her mother." From then on until Albert and I returned in 1946, the work of the herbarium was carried on sporadically by graduate women, sometimes one, sometimes two at a time, and usually only during the regular school year.

Those were trying days for Dr. Coker who had become so accustomed to my being on hand at all times to keep everything moving along and in good order. I was always there to discuss various ideas with him, to plan for the future of the herbarium, or to get out the plants he needed for his latest study. He was beginning to have problems with his health, and had been hospitalized a couple of times. It was difficult for him to get through the winter without a bad cold and the threat of pneumonia. After I left Chapel Hill, the Cokers and I kept in touch by frequent letters back and forth. His comments were revealing: "The herbarium is making little progress since you left...Most of the time there's nobody to press things or look after things that are always coming up." That fall he seemed to be feeling particularly low - "One of our greatest trials is that we have nobody that can give whole-hearted attention to the Herbarium...there's not a soul to help me in any way...I wish that you were back with us."

Upon the advice of his doctor, he had given up chairing several campus committees, had resigned as President of the Highlands Biological Corporation, and had turned over the Chairmanship of the Botany Department to Dr. Couch.