

CHAPTER SIX: THOSE TWELVE LONG HARD YEARS

Early in January 1956, the six botanists met, and with Albert as principal investigator, set their goals and agreed upon procedures. The Project, covering both Carolinas, would be divided into three work phases: 1) General collecting over the two-state area for distributional data; 2) Identification of plants and plotting of their distribution on county maps; and 3) Preparation of manuscript with descriptions, keys, and diagnostic drawings, culminating in the publication of the Manual. It was agreed that the three younger members, Radford, Ahles, and Bell, would do the major share of the collecting and field work, while the remaining three would begin compiling data from the herbaria of Duke, State, and UNC. The six botanists listed and divided the plant families, each first selecting those he was most familiar with and interested in - he would be responsible for their taxonomic treatment, regardless of collector.

The two state-area was superficially divided into 45 roughly similar sub-physiographic groups of three contiguous counties. From each group, one county was assigned to each of the three collectors. It was his responsibility to collect that county four times in one year: early spring, spring, summer, and fall, in order to catch as many species as possible in both blooming and fruiting stages. Ahead were thousands of miles to travel and thousands of plants to gather. The three younger botanists were eager and ready to go.

The Department had only one vehicle, a Chevrolet station wagon. Some private transportation would have to be used. Since Harry did not drive, he first went with either Albert or Ritchie. One of Albert's favorite stories is about the time he and Harry were collecting in a large, weedy field near Murphy, a small mountain town in North Carolina. As was their habit, in order to avoid too much duplication of species, each was calling out to the other the name of each different plant as he collected it. The farther apart they wandered, the louder they called - "Carex swanii!", "Ranunculus abortivus!", "Cardamine hirsuta!", etc. Soon half the townfolk were lined up along the edge of the field, curious about those two "loonies" who were pulling up weeds and stuffing them into bags, while shouting loud insults at each other in a strange tongue - certainly not the King's English.

It was soon decided that two "experts" collecting together was a waste of time and talent except in certain rare cases. Harry's main job was to collect, so that kept him out many days during the week and sometimes over the weekend, usually in the Department vehicle with a student driving. Ritchie and Albert collected independently, each using his own station wagon when the Department carryall was not available. The great increase in collecting caused a need for more blotters and ventilators. In the absence of money for new supplies, Ritchie obtained roofing felt which he cut into blotters. A furniture company gave him its large packing boxes, and from these they made numerous cardboard ventilators that worked quite well. In fact, money for the Flora Project was very hard to come by that first year. Harry's salary was paid by a grant from an Alumni fund and a gift

from Mrs. W.C. Coker. The University Research Council gave the collectors financial help for travel, but all other expenses had to come out of their own pockets.

From mid-March to mid-October Albert made 55 trips, traveled over 13,000 miles and collected some 17,000 specimens. As soon as public school was out, the children and I were free to accompany him whenever he was using our station wagon. We went with him on 25 of those trips for a total of over 7,000 miles. Sometimes we camped out in state parks since there was no money for lodging. From those family excursions we brought back close to 10,000 specimens. The kids and I can't claim too much credit there, I hasten to add. David and John were much more interested in chasing after butterflies for the former's growing North Carolina collection. Only little five-year old Linda followed her Dad around, eagerly bringing him "noo" flowers which he graciously accepted although he had just collected same. My time was divided between helping collect and press, and settling questions such as "Which of you boys swished the head off that perfect plant specimen, just to catch a butterfly?" More important duties were preparing lunches and keeping an eye on everyone's safety. I had to watch out for disgruntled serpents, brush-covered holes, poison ivy and poison sumac, slippery river banks, and NO TRESPASSING signs that somehow seemed to escape the notice of the chief collector. In spite of such minor irritants, a few intensely hot and dusty days, and many, many long hours of collecting and pressing, those family trips enabled us to see and enjoy the beauty of the Carolinas in all seasons from coast to mountains as no other endeavor could have. They also strengthened family ties, usually, that is..

Everyone worked hard that summer. On June 4th I wrote my folks that Albert had come in from Highlands "safe and sound and a little thinner, after a whopping week of collecting. He brought back over 2,000 specimens and left the drier full up there and Harry pressing what they had collected Saturday. I hope Harry doesn't have a heart attack from overwork...They have added a lot of new records to the counties...quite a few coastal plain plants turned up in the mountain bogs..." Harry and Ritchie continued to collect there for another week, bringing the total to 4,000 plants. At the end of this first season, they sent to the University Research Council the following report:

25,000 miles traveled;
Over 52,000 specimens collected;
50 new records for each state;
30 records for physiographic provinces in both Carolinas.

Their knowledge of the distribution, morphology, and ecology of the vascular species had increased tremendously. To quote Dr. Adams: "We have done enough field work to realize that the present understanding of plant geography in the two Carolinas will have to be revised considerably."

A similar report sent to the National Science Foundation in March 1957 apparently convinced NSF that the Flora Project was deserving of some financial backing. A two-year grant was arranged, the first payment to arrive that fall. During the summer, small but welcome grants from the University helped keep the collecting going. At the end of the two-year period, Albert reported to NSF that Phase One of the Project had been completed with collections and field observations from all 146 counties, over 120,000 miles traveled and 175,000 specimens collected during the three growing seasons. Phase Two was well underway with about 65% of the collections identified and sites plotted on county maps. Progress had been made in Phase Three with some keys and descriptions written and a few genera illustrated. "Research to date has yielded over 240 new state records and two species new to science...five papers published and four more in press." As Dr. Adams wrote to Dr. Couch, "All field work, involving an almost literal scouring of North Carolina and South Carolina, has been completed. It has been a herculean task, but the collections resulting therefrom make possible the production of a really authoritative flora of the Carolinas."

Over the next three years taxonomic activity in Davie Hall reached fever pitch. Descriptions and keys were being written, field identifications checked, mounting supervised, and fresh material brought in and illustrated. Talented Peggy Ann Kessler, a botany major, had been drawing the graminoids and umbels, but before long she left to marry Jim Duke. It was the Project's good fortune to have her work continued and completed by an exceptionally fine artist, Marion Seiler. The majority of the illustrations in the Manual are faithfully portrayed by Marion's beautifully shaded line drawings.

An extensive exchange program with 61 institutions in the United States and around the world had been set up by Harry and Albert. More space was needed for packaging exchange material to be sent out, and for checking incoming plants from other institutions. Plant pressing had been moved to the basement, along with the driers. Upstairs all interior walls of the Herbarium had been removed to make room for more cases. Old Davie was bursting at the seams. A new botany building was on the drawing boards, but the happy moving day was a couple years off.

For a time, work on the Flora slowed down. Ritchie was chairman of the building committee, and Albert and Harry had to plan way ahead for the big move. They decided it was time to replace with modern steel cases, all of the old glass-doored oak cabinets that had served the Herbarium from earliest times. They just could not be bug-proofed. A generous gift from George R. Cooley (the Herbarium's long-time benefactor), with matching funds from the University, plus a substantial NSF grant, paid for 243 steel cases.

Their arrival was timed to coincide with the move to Coker Hall, the new Botany building. And what a move it was! All those heavy wooden cases full of plants, all equipment, supplies, and storage cabinets had to be maneuvered down the many steps of Davie Hall, loaded onto trucks, and driven across campus to their new home. There everything was

to be taken to fourth floor by elevator. As fate would have it, those wooden cases were just a trifle too long to fit into the elevator. Nothing to do but transfer their contents to boxes and send them up to fourth. Many of the old cases were left on first floor to house the algae collection but a number of them were manhandled up the many turns of the stairwell to be used as storage cases by Botany students and faculty. At long last the move was complete, and for the first time the entire vascular herbarium was housed in uniform steel cases. The Botany Newsletter stated: "Dr. A.E. Radford, Director of the Herbarium, and Mr. Harry Ahles, Curator, are most pleased with the new quarters in Coker Hall...the Herbarium is now, not only one of the largest in the country, but also one of the best housed."

By the following year, 1964, all keys and distributional data for the Manual had been written. The authors wisely decided to first field-test the keys of the forthcoming Manual, by getting out an abridged edition to be called a "Guide to the Vascular Flora of the Carolinas". Accordingly, a 383 page field guide was published by the Book Exchange in September, at a most reasonable price. It proved to be very popular, so that by the time of the publication of the Manual, all 5,000 copies had been sold.

Although the authors, Radford, Ahles, and Bell were responsible for most of the families, a number of other botanists must be given credit for their treatments of certain families. Among these are W.T. Batson, E.O. Beal, D.S. Correll, Francia C. Hommersand, H.R. Totten, W.H. Wagner, Jr., and R.L. Wilbur. Dr. Blomquist, who was at that time Professor Emeritus, was given special thanks for identifying most of the grasses, and J.E. Adams for his professional editorial assistance and organization of the format.

The Guide received favorable comments, such as "a work of high quality", "edited and proof-read exceedingly well", "a landmark in the history of Southern botany!" and so on. A second book, an "Atlas of the Vascular Flora of the Carolinas" was published by the North Carolina Agricultural Experiment Station in 1965. It was a collection of county dot maps showing the documented distribution of each species of vascular plant known to occur without cultivation in the Carolinas. The authors hoped to stimulate interest in filling in the gaps with documented collections. The Atlas was well received and its purpose accomplished.

Ten years had gone by since the organized beginning of the Flora Project. At long last everything had been put together in manuscript and sent to the University Press. At this point, in the spring of 1966, Harry suddenly announced that he was leaving. He had come to the herbarium at a time when his special talents were urgently needed. He had stayed his ten years, had collected thousands of specimens for the Flora Project, and had pressed, identified and documented them. He had worked hard, seven days a week and often 15 hours a day in field and herbarium. He had written up his families and turned them in. Now, he decided, it was time to leave. He felt that he had accomplished his part of the Project, though there still remained many months of proofing, reading, rewriting, and

further proofing. He had little interest in writing, even less in rewriting. Harry was in his element in the field, and there he had no peer. His passion for collecting, identifying, and classifying caused an admirer to dub him "a modern Linnaeus". Harry was unique. Comfortable in his old field clothes and plaid jacket, he cared little about social functions. His brusque "I'm not coming" doubtless took care of any second invitations to dinner. Yet no one could be kinder, more considerate, or more unselfish than Harry when it came to sharing with interested students, his vast storehouse of knowledge about plants or anything else in nature. During breaks or after hours, students clustered around him as though drawn by a magnet, drinking in every word. He was a natural born teacher.

In answer to a friend's query as to why he would want to leave a position in such a prestigious University, Harry replied, "They have air-conditioned the Botany Building...I will not work in an air-conditioned laboratory." He got a job as curator (in an air-conditioned building, no less) at the University of Massachusetts, soon learned to drive a car, and even taught a course in local flora, something that he could never be persuaded to do at UNC! Fifteen years later, in the spring of 1981, Harry's many friends were shocked and saddened by the news of his sudden death, following an operation for lung cancer. Albert wrote Dr. Oswald Tippe, Harry's long-time friend, "He had the keenest eye of any individual, professional botanist or otherwise, that I have ever met...as far as his knowing plants in the field, I have never met his equal...Harry was truly a unique individual who made a fundamental contribution to the field of botany in the eastern United States."

Perhaps what he meant to his many student friends everywhere was best expressed by those at Amherst who at his death helped compile a little paper of "Remembrances" in 1981 from which the following quotes are taken:

"By his knowledge and enthusiasm for field taxonomy he increased our powers of observation and our recognition of species."

"He is a legend in the South where botanists are always interested in a few more Harry stories."

"...although I may never see Harry again in body, I see his spirit all around me: the wildflowers, the spring buds, the returning songbirds and all that is nature."

"How very much I have to be thankful for...for having Harry as my friend and mentor."

"I am glad for Harry's sake that his end came swiftly, and I'm glad for our sake that he died as the gentle rustlings of spring began. Somehow the morningsong of the northbound sparrows and the flowers of maple and myrtle make his death a little easier to take."

Harry will not soon be forgotten, neither will be forgotten the impact on the Manual of the incredible amount of work he did while here.

Many others had contributed significantly to the production of the Manual. Deserving of special recognition are those graduate students and friends who did research on floras and revisionary studies: L.S. Beard, A.E. Blair, R.F. Britt, C.J. Burk, Henrietta L. Chambers, P.J. Crutchfield, Tom Daggy, J.A. Duke, Peggy K. Duke, O.M. Freeman, F. Gabrielson, O.M. Gupton, J.H. Horton, Anne McCrary, Jean McNeely, J.F. Matthews, Lionel Melvin, Judy Morgan, Dan Pittillo, G.S. Ramseur, C.L. Rodgers, Jr., G.P. Sawyer, W.D. Seaman, M.N. Sears, Drake Smith, S.E. Stewart, G.E. Tucker, B.S. Williamson, and John Bozeman. Those who identified special groups were: H.L. Blomquist, T.G. Yuncker, T.R. Fisher, U.T. Waterfall, E.T. Wherry, W.P. Adams, Robert Kral, Don Drapalik, Judith Lee Rogers, E.O. Beal, and F.C. Crosswhite.

At last the first copies of the Manual were coming off the Press! There was great rejoicing as well as loud sighing of relief in Coker Hall. "We are celebrating this week the arrival of the first copies of the MANUAL OF THE VASCULAR FLORA OF THE CAROLINAS --- a great event in the history of the Press as well as the Botany Department." So wrote Lambert Davis, director of the University of North Carolina Press, to the chairman of the Botany Department, Dr. Victor Greulach, on December 18, 1968.

The production of that manual has indeed to be judged a "great event", the most significant achievement to date in the life of the Herbarium. As we look in retrospect at the decision of a mere handful of botanists to write the manual and as we follow their struggles through those twelve long hard years to make their dream come true, we are amazed that they were able to accomplish their purpose so admirably. Many times it was sheer grit, dogged determination, and unshakable belief in and dedication to their cause that kept them pushing ahead in spite of numerous roadblocks. Grant money didn't fall into their laps; they were required to prove themselves first. If ever a major undertaking was started on the proverbial shoestring (with a certain amount of naive optimism), that was the Flora Project!

The Manual was an outstanding work, a book of 1,244 pages with descriptions, keys, and distributional data for over 3,200 species of ferns, conifers, and flowering plants, a glossary of over 450 terms, approximately 2,000 distribution maps, and more than 1,800 illustrations. As of June 1998, **40,472** copies have been sold.

A sampling of comments and reviews follows:

"This monumental book... This classic work... a landmark in its field... is without peer." -
The University of North Carolina Press.

"This is a big and important publication. It will not soon be replaced by a better one. Its facilitation of teaching and research will be enormous. It is now the standard reference

to a significant part of the flora of eastern North America..." - Dr. William Culberson, Duke University.

"The illustrations are magnificent...The Manual will fill a need far beyond the Carolinas." Dr. Stewart A. Ware, College of William and Mary.

"This manual is the culmination of intensive studies of the Carolina flora begun by the authors in 1956. By repeated collecting forays to all parts of North and South Carolina they accumulated more than 200,000 specimens that have served as the primary reference for this work...It is a handsome job, with descriptions, indented keys, dot maps, and many illustrations... In sum, the authors have done a good job of finding out what actually grows in the Carolinas and making it possible for people with a modicum of botanical training to identify Carolina plants in accordance with present taxonomic and nomenclatural concepts. That is a major accomplishment, for which they deserve ample credit." - Arthur Cronquist, The New York Botanical Garden.

"The superb bi-state flora by Radford and collaborators, the most modern in the Southeast, is a worthy successor to a botanical tradition begun with Catesby in the early eighteenth century." - Dr. D.G. Frodin, Guide to the Standard Floras of the World. Cambridge University Press. 1984.

It was good to pause and enjoy the feeling of accomplishment that came with the production of the Manual. Dr. Coker's dream had at last become a reality through the persistent efforts of a dedicated few and the invaluable support of many. The Herbarium had finally become a modern herbarium with national standing.

It was time to look to the future. There were new tasks to accomplish, new challenges to meet