Benjamin Carroll Tharp (1885–1964) Remembering a Life Fashioned of Events and Circumstance

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Abstract: Benjamin Carroll Tharp was a legendary Texas botanist who made fundamental contributions to understanding the vegetation of the state and to developing the University of Texas Herbarium. His publications in the early and middle 1900s were used by numerous writers and artists in the southwest, and throughout his career he contributed generously to students and colleagues needing field collections for teaching and research. Later, however, he became caught up in the changing trends in botany that shifted staffing, administration, and departmental emphasis away from descriptive field studies and more toward laboratory and experimental research and newer methodologies. He was also concerned in later years with completing a lengthy treatise on soil-vegetation relationships and soil development in non-glaciated regions. The result of these many factors was a complex individual with deep feelings for his native state and great respect for those studying its natural history. He also harbored resentments and anxieties manifested as a stoic personality easily interpreted as bitter and even angry. He was all of these but for those closest to him he was admired for his deep reservoir of knowledge about plants which he shared generously with those devoted to Texas and its vegetation.

Keywords: B. C. Tharp, Texas, vegetation, natural history.

When Captain H. Malcolm Macdonald, U. S. Navy (Ret.), and Professor of Government at The University of Texas, Austin walked in with his characteristic military bearing to American Government 610 in the Summer of 1954 he perused the class roster and said, ''Where's Graham''? I raised my hand and he said, ''Good. Macdonald, Graham, and Tharp- the Scots have things well in hand.'' This was my first indication that the elderly, rather dour professor seen in the Biology Laboratories Building was well-known outside the Botany Department. But well-known he was—to the Klebergs of the famed King Ranch and historian Tom Lea, author of *The King Ranch* (1957) who sent Tharp a special-bound set of books acknowledging his work on grasses (p. 750); legendary Texas naturalist Roy Bedichek (*Adventures with a Texas Naturalist*, 1947); folklorist J. Frank Dobie (*A Vaquero of the Brush Country*, 1928; *Coronado's Children*, 1930; *The Longhorns*, 1941); Texas wildflower specialist Eula Whitehouse (*Texas Flowers in Natural Color*, 1936); and prolific short-story writer O. Henry (*The Heart of the West*, 1907; *A Chaparral Christmas Gift*, 1910). All of these authors and artists drew on the extensive knowledge and writings of B. C. Tharp, known as the 'Father of Texas Ecology'. He was a member of Phi Beta Kappa often referring to it as 'an organization often maligned by those not involved', a life member of the Texas Academy of Science, and Vice-Dean of the College of Arts and Sciences (1928–1934). He was on the board of the Austin Bank and a friend of executives of the Humble Oil and Refining Company (now Exxon). He was also a participant while still a graduate student, with geologists from the Bureau of Economic Geology and Technology and the associated legal consul in the border dispute between Texas and Oklahoma. The case was argued before the U. S. Supreme Court during its October term in 1919, and the ruling was handed down on January 15, 1923 (Sellards et al., 1923). The boundary

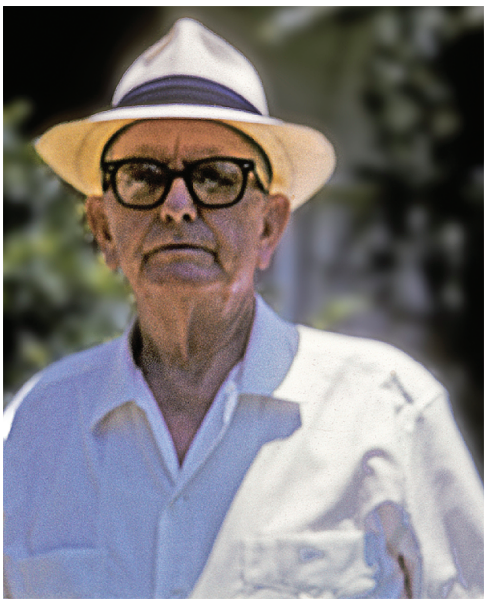

FIG. 1. Benjamin Carroll Tharp from a photograph taken by the author at the Biology Laboratories Building, University of Texas, Austin, in 1961.

had been set at the mid-channel of the Red River and the contention was that the river had been eroding its way northward. The issue became important as oil in the underlying strata became increasingly valuable. Professor Tharp enjoyed recounting that expert witnesses for Oklahoma testified that trees in the channel were all young indicating the river could have had been moving north. 'Not being blessed with the gift of determining the age of a tree by looking at the bark, I had some of them felled and they were much older than the date of the treaty', so there was no way the channel had been eroding north to the benefit of Texas and at the expense of Oklahoma.

After he died a number of articles appeared recounting his professional accomplishments and the facts and figures of a long, eclectic life (Whaley, 1965; Turner, 2008; Handbook of Texas Online; Wikipedia, The Free Encyclopedia; Anonymous, 1971). Benjamin Carroll Tharp (Fig. 1) was born in Pankey, Grimes County, Texas, about 100 miles east of Austin, on November 16, 1885 the son of Edwin and Angelina (McJunkin) Tharp. He attended Sam Houston Normal Institute, Huntsville (1908–1910; now Sam Houston State University) and The University of Texas, Austin (B.A., 1914; M. A., 1915; Ph.D., 1925). He worked as a plant pathologist in the Texas Department of Agriculture (1915–1917), Associate Professor of Biology at Sam Houston Normal Institute (1917–1919), Instructor in Botany at the University of Texas (1919), then Associate Professor (1925), Full Professor (1933–1956), and Director of the Herbarium (1943–1956). Among his principal publications are *Structure of Texas Vegetation East of the 98th Meridian* (1926), *The Vegetation of Texas* (1939), *Texas Range Grasses* (1952), and co-editor (1962) with Chester V. Kielman of Mary Sophie Young's *Journal of Botanical Explorations in Trans-Pecos Texas, August–September, 1914*. In 1942 John Potzger of Butler University, Indianapolis, Indiana wrote to Professor Tharp inquiring if there were any peat deposits in Texas suitable for spore and pollen analysis. By this technique Potzger hoped to reconstruct the Holocene vegetation of this area far south of the glacial boundary. Tharp located and cored the Patschke (Lee County), Gause (Milam County), and Franklin (Robertson County) bogs and sent the material to Potzger who did the analyses. The results were published by Potzger and Tharp (1943, 1947, 1954).

This litany of biographic data is useful as a historical record of a professional life but it fails to reveal the human side of a prominent, complex person living at a pivotal time in American higher education, and one shaped particularly by changing directions at The University of Texas around the 1950s. By way of explanation in recounting the more personal side of his professional life, I should note that our association began near the end of my sophomore year at Texas in 1954, continued through my Master's degree in 1958, and through occasional correspondence and visits until his death in 1964. During that

time I took his two courses in the Vegetation of Texas (1955, 1956) and in Plant Ecology (1956) that included travel across central Texas on field trips in his well-worn Dodge automobile, and frequently beyond on weekends for extra collecting. As a side project in the room next to Professor Tharp's office I also began tracing overlays of vegetation and geology maps onto a state highway map that allowed us to track the geologic and plant formations as we traveled along the road. He became interested in the composite map as it emerged, and even suggested it be continued as part of a Master's Degree. The idea was to use the very large aerial photographic map of Texas mounted on the wall of the Texas Memorial Museum on Red River Street as the base map for a broader synthesis. It would have required scaffolding and 3-D stereopticon glasses to prepare a detailed vegetation/geologic outcrop/physiographic map and accompanying text for the state. To a sophomore the project had an appealing Michelangelo-ish ring to it and in hindsight it might have proved useful for periodically tracking changes in vegetation and detecting their causes. Chairman W. Gordon Whaley even mentioned, in Tharp's presence, that it could be worthwhile if we used 'a modern taxonomy' by which he meant that of Billie Turner as opposed to that of Tharp. However, two things argued against it. One was that directions in botany were changing and it was apparent that such a descriptive compilation would serve primarily as training for preparing a never-ending series of similar maps. The other was Billie Turner's suggestion that the new field of palynology might be interesting, and so it has been. Even with this change in thesis topics, however, Professor Tharp continued his support that proved of inestimable value in completing the project (see later section). In 1955 I set up a primitive palynology 'laboratory' on the fourth floor of the Biology Laboratories Building where the herbarium was located. The laboratory and my desk were located in a corner of the taxonomy classroom at the vortex between the offices of legendary B. C. Tharp, the formidably focused and impressively knowledgeable doctoral student Marshall C. Johnson, and the soon-to-be legendary B. L. Turner who was often in the herbarium across the hall. As one of the few undergraduate botany majors at Texas at the time, and perhaps the only sophomore focused on taxonomy and natural history, I became a surrogate student of Tharp. In part this was because I treated him with the deference he expected, especially from a student, and it was obvious that to do otherwise could provoke a good scorching. It was from conversations between 1954 and 1958 that some direct revelations, as well as hints and impressions, provided insight into Tharp's attitudes and feelings. He made no secret of his opinions and all the views recounted here involving others were public knowledge according to my best recollections. An effort was made to locate his correspondence and writings but almost none of it is catalogued at The University of Texas. He had a son, B. Carroll Tharp (deceased), an architect in the firm of Koetter, Tharp, and Cowell in Houston, but the firm is no longer in business. On June 1, 1971 the son wrote to me stating:

> ''For several years, I have attempted to work with the University of Texas to arrange for the publishing of a book which my father was writing at the time of his death. Due to many circumstances, I have been unsuccessful in this effort and in lieu of publishing the book, my wife and I have purchased forty-two acres in San Jacinto County which we propose to dedicate to Dr. Tharp as a wilderness area. The property is located only a mile and a half from the shores of Lake Livingston, and one side of the property is bordered by a spring-fed creek. The land is partly open and partly wooded, the trees consisting of oaks, pines, magnolias, redbuds and dogwoods. We will plant wild flowers in the open field and hope to construct a small lake on the hillside. In the future, a

> small museum will be built to house some of my father's books, slides, manuscripts and other mementos. As we accumulate them, other small trees that are native to this region will be planted, and we like to think of this as becoming a living memorial to him.''

The wilderness area and museum were apparently never built. The papers may be in possession of the family but the two children of B. Carroll Tharp could not be located.

In later life Professor Tharp presented an air of someone bitter, even angry with the course of events in the Department. It was his expectation that anyone in botany at Texas should know something about Texas botany. There may have been also a subliminal feeling that this knowledge involving an area so extensive and so diverse would be broadest and felt deepest by lifelong, native residents educated in the state—a fading mark of the 'Texas mystique'. His interests were exclusively within the state and one manifestation of this was the minimum time he spent on obtaining exchange material sent to herbaria elsewhere. In his later years he would often strip a few twigs from trees around the pond behind the Biology Laboratories Building, hand-write a label, and mail them off. There was an expectation, honed by some precedent at the time, that diligence, accomplishments that gave him prominent status among his local peers, his administrative experience, seniority, and an exemplary personal life meeting the highest of southern standards (Baptist, Deacon, Mason, and Democrat) would mark him for leadership of the Department of Botany at The University of Texas.

However, two global events changed the balance between research and teaching, and graduate and undergraduate education in many large American Universities. One was that with the end of World War II in 1945 considerable resources were becoming available for domestic purposes. Then, on October 4, 1957, the Soviet Union launched the satellite Sputnik, intensifying the Cold War and establishing Russia as a major player and a dangerous competitor in world politics. The response in the United States was partly altruistic in that there was a nationalistic desire to keep pace with a foreign challenger. It was also partly economic in anticipation of the vast amounts of federal money that would become available for research. The greatest need was for modern, technologically innovative research, and much less attention was given to descriptive natural history. With the benefits of newly available resources, and the need to upgrade science, the Botany Department at Texas began hiring individuals that were an anathema to the likes of Benjamin Carroll Tharp—W. Gordon Whaley (Ph.D., Columbia University, Chairman at Texas, 1949–1962); Harold C. Bold (PhD, Colombia University, 1957–1978); Charles Heimsch (PhD, Harvard University, 1947–1959); and Irwin Spear (PhD, Harvard University, 1953–1994). In public Tharp maintained a seething politeness to Whaley, Bold, and Heimsch, but both in public and in private he could not abide Irwin Spear perhaps because he was a further anathema to an old-guard natural historian of the era- a physiologist. He liked Ralph Alston (Botany Department between 1956 and 1967), as did most everyone else (Graham, 1999, p. 307), but he still belonged to a category of recent appointees whose research and its relevancy to Texas botany was a mystery to Tharp. He did not have anything critical to say about Billie Turner even though he was the new taxonomist and Director of the Herbarium. He thought Billie didn't know enough local plant species names, and I suspect Billie thought many of those Tharp knew were wrong or outdated. In the plant taxonomy classes Tharp's goal was to have students recognize as many plants as possible. I recall Billie's view was that family characteristics, relationships, speciation processes, and emerging methodologies in taxonomy were more important than memorizing names that could be found in the literature. Tharp mused whether Larry McCart was deliberately slowing the mounting of the Silveus

Grass Collection to prolong employment, and if the enigmatic Lloyd Shinners would ever complete the *Spring Flora of the Dallas-Fort Worth Area, Texas* (1958; Ginsburg, 2002). These and other concerns were expressed during mid-morning tea breaks in the herbarium or on field trips while sitting under live oaks on the limestone outcrops (motts) of central Texas, or on park benches under the 'lost' pines near Bastrop. His views were admirably restrained on other occasions, as when we took Harold Bold to collect *Isoetes* at Enchanted Rock.

Another of Tharp's concerns was completing the book he had been working on for several years dealing with the relationship between vegetation, geologic formations, and soil, and with soil genesis in periglacial regions (viz., beyond the glacial boundary). He had suffered one heart attack and was aware that time was running out. It became apparent in Plant Ecology that a principal aim of the plant taxonomy courses was to provide the background for recognizing plants that demonstrated the relationship between geologic formations, soils, and vegetation. Numerous examples were pointed out on the ecology field trips where a sharp ecotone existed at the contact between two geologic formations of different lithology. Professor Tharp was uniquely qualified to make such observations because his early work involved defining the composition and distribution of the plant communities of Texas. However, a major portion of the book was a reaction to a specific point in the writings of Russian soil scientist K. D. Glinka (*The Great Soil Groups of the World and their Development*, 1914) which had also been used in the U. S. Department of Agriculture's 1938 Yearbook, *Soils and Men*. These works dealt extensively with the glaciated parts of the Northern Hemisphere, and Tharp was convinced that both groups had been misled by the overlying veneer of glacial soils into believing that given enough time different bedrock would weather into a similar soil type. By the mid-1960s this view had changed but he felt compelled to get his observations from an extensive unglaciated area like Texas into the literature. In Texas, limestone rock weathered into limestone soil, and granites and sandstones weathered into sandy soils. 'They tell me that when talking about soil development you have to forget about time. I'm willing to forget about time. All I'm saying is there has not been enough time' - referring to the Precambrian granites of the Edwards Plateau, Lower Cretaceous limestones like the Glen Rose Formation and the Austin Chalk, and the Eocene Carrizo sandstones of the Coastal Plain. In preparing the book, every semester for years a cadre of undergraduate secretarial workers would spend hours copying verbatim multi-page quotes from Glinka's work, translated into English by Marbut (1927; see Glinka, 1914), and from *Soils and Men*, with the justification that 'I want them to speak for themselves'. Even with the editorial practices of the day it is unlikely these lengthy quotes would have made it into print, and, if so, the book reviews of a subject no longer timely would probably have been unfavorable or the work mostly ignored. In many ways Tharp's later life and his writings had been caught in the transitional times of the 1950s and 60s. He did not adjust to these changes and as a result he was unhappy with his fate in the Department and anxious about completing his *opus maximum*. His rather lugubrious air toward the end of his life reflected these feelings.

In spite of these concerns there was another side of Professor Tharp that was supportive, generous beyond expectations, and unexpectedly humorous under the right circumstances. By way of example, one day he brought into the herbarium two large buckets of prickly pear fruits from the King Ranch. During droughts, workers on the ranch would sit on the back of jeeps with flame throwers and burn the spines off the cactus pads which would then be used for cattle feed. Toward the end of this particular multi-year drought the seeds of *Opuntia*

were not germinating and Tharp was asked to find out why. The first step was to get the seeds out of the fruit and the job was given to me for a pay of $5 an hour. The small glochids had to be burned off with a Bunsen burner, the fruits chewed, and the seeds spit into a jar. At first I thought about prolonging the task to earn more money, and later considered subcontracting it out at $2 an hour to some undergraduates but that was to no avail so the task was eventually finished. Tharp asked me if I had any thoughts on the matter. I said that the only thing more disgusting than fermenting seeds in a jar of saliva was the thought of someone having to work with such material. After a moment he almost smiled and said, 'Might be a job for those people downstairs' [meaning the newly hired faculty].

Professor Tharp's support ranged from the incidental to the fundamentally important. He often left tickets on my desk to concerts in the acoustically-challenged Memorial Gymnasium. On the other hand, when it was decided my thesis project would be spore and pollen analysis, he spent several days taking me around central Texas looking for suitable deposits different from those he had already studied with Potzger. We went on a number of field trips and eventually located the South Soefje Bog at Ottine, Gonzales County, near Palmetto State Park. Then he contacted a friend at the Humble Oil Company and arranged for a grant that paid my tuition, salary, travel, supplies, and equipment even though the thesis was officially under Charles Heimsch. Humble also provided the radiocarbon dates. A grant supporting a Master's degree was unusual in those days and the freedom to pursue research full time contributed to the study being published in *Ecology* (Graham and Heimsch, 1960). Later Professor Tharp gave me the Dodge to use as a field vehicle. In 1958 as I was about to leave for the University of Michigan he took me to the Austin Bank and arranged for a loan to buy a 1957 Chevy Bel Air with the comment, 'This will look better up there'. He told the bank manager in my presence and, I think for my benefit, 'If he doesn't pay this off, I will'. During undergraduate days at Texas I was living in the old Hill Hall behind Memorial Gym on an athletic scholarship, but during the summer things were lean to the extreme. I made it through many long week-ends in the Biology Laboratories Building by eating half a Milky Way candy bar with half a can of Pepsi on Saturday from the vending machine on the second floor, then eating the other half on Sunday. The fluff from the candy and the carbonation from the Pepsi would swell up and give the sensation of being full—two days of subsistence for 25¢. Nonetheless, I would have lived on candy bars and Pepsi for a long time before defaulting on that loan.

During one of the field trips we went into a store in an isolated rural area of East Texas to ask for directions to Anahuac (pronounced Ana-wak). The old woman behind the counter said, 'It's An-u-wak'. 'How can it be An-u-wak', Tharp said, 'there's no 'u' in the middle of the word'. She pulled herself up to her full 4′9″ and said 'young man (he was in his 70s at that time), I've lived here for 97 years; and its An-u-wak.' Professor Benjamin Carroll Tharp nearly smiled again.

There is a view that the human fabric is composed of strands contributed by events and experiences—strands that give color, strength, and ultimately value to the tapestry. Benjamin Carroll Tharp was fashioned of many different strands incorporated during times of considerable change in the nation and in the direction of botany at The University of Texas. He contributed greatly to his beloved state. He also had difficulty coping with the changing times, but when given the chance by others, and when moved by his own inclination, he could share mightily with those privileged to know him.

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remembrances of an interesting figure in the history of plant sciences in Texas. William Carr sought information on the intended Tharp Wilderness Area, and kindly provided an e-image of my original photograph used in Fig. 1. I also thank Beryl Simpson and two reviewers for their helpful comments on the manuscript.

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