

## WARNOCK'S LAW—A TRIBUTE

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In the Spring of 1945 I was invited by C. L. Lundell to spend the summer traveling around Texas to collect specimens of Rosaceae as a basis for a treatment of that family in his projected multi-volume Flora of Texas. I secured the necessary permission to take leave from my job at Beltsville, Maryland, where I worked for the U. S. Department of Agriculture. I traveled by train to Dallas, where Dr. Lundell introduced me to Southern Methodist University and to Lloyd Shinnars, and provided me with a beat-up pickup truck (I think it was an International Harvester) that had been worn out by the Army before SMU acquired it. With that truck, and some patience, I saw most parts of Texas before the summer was out and found and collected many Rosaceae.<sup>1</sup>

In the course of my travels I had to pass more than once through Austin, where I visited Prof. B. C. Tharp and met his industrious student Barton Warnock. Barton and his wife Ruel lived in an apartment that I remember as being on the bluffs above the Colorado River, on the west side of the city. Barton and I were about of an age and both interested in local floras, and we hit it off well.

My next visit to Texas was in March and April, 1947, when I was specializing in *Prunus serotina* but collecting all Rosaceae and everything else I could find in flower. My assistant was Alton Harvill, then concentrating on bryophytes and later to become an authority on the Virginia flora. It must have been near the end of March

when Alton and I arranged to meet Barton Warnock at the crossing of the Pecos River. Barton was then newly arrived as a staff-member at Sul Ross State College (now Sul Ross State University) at Alpine. As we waited in the early morning, here came running up to us a young man carrying a grass (a *Blepharidachne*) with which he challenged me—"Betcha you don't know this one!" It was true, I did not. This was our introduction to Barton Warnock's student, a lively character named Billie Turner.

We spent three weeks in the Trans-Pecos, much of the time with Barton as guide and collecting companion. It was at this time that we visited Wild Rose Pass, in the valley of Limpia Creek northeast of Fort Davis (McVaugh, 1948). Our most exciting venture with Barton was an overnight trip from Alpine south to Reagan Canyon, where we camped in the open on a lonely terrace above the Rio Grande. The river here was a softly running clear stream. Barton and I swam across to get clean (and I to say that I had been to Mexico), but Alton (having recently been exposed to a class in bacteriology) abstained after thinking of the cities and settlements further up the river.

Billie Turner's eloquent and sympathetic assessment of Barton Warnock (Turner, 1998) as the botanist who knew all the ranchers, who all knew him, was "He was their systematist." Even in 1947 Barton impressed me (a tenderfoot from the East) by his easy knowledge of the

<sup>1</sup>Upon returning to Beltsville, I decided to begin my work toward the "Rosaceae of Texas" by revising a group that included but two species and seemed to be without any major taxonomic problem, namely the species of *Prunus* in which the flowers are borne in racemes terminating short bracteate branchlets. The work on the first species, *Prunus serotina*, was published six years later (McVaugh, 1951), after a considerable amount of fieldwork throughout the United States and Mexico and after much soul-searching. By that time I realized that the work on the related *Prunus virginiana* might be even more time-consuming, and after that I would be faced by the rest of *Prunus* and all of *Amelanchier*, *Cercocarpus*, *Crataegus*, and *Rubus*. Accordingly, I worked my way into something easier (the American Myrtaceae), and the poor Rosaceae were abandoned.

country, the back roads including the ranch roads, and his familiarity with all the local plants. It was a very good season in West Texas, and even though everywhere in the desert was good collecting that year, he always seemed to be able to point us without hesitation to the very best. I remember he took me to a pasture where there were hundreds of the then little-known and supposedly rare *Allium coryi* M. E. Jones, a yellow-flowered onion.

My lasting impression is that the best part of life for him was to be out in the deserts and the mountains, studying and collecting plants, always cheerful and upbeat. When we hiked together, I carried a wooden plant-press full of papers and bound with a strap. I stopped as in duty-bound at short intervals and pressed whatever few collections had come my way. Barton carried by a strap an opened carton advertising canned milk with the top cut out, into which he piled loosely pressed specimens as he went along (Fig 1). The weight of the most recent ones gradually pressed down the ones on the bottom, so that by the end of the day he had a lot more specimens than I did, and they were passably pressed.

Perhaps Barton felt as I did then and in later years, that collecting plants for the herbarium was the most enjoyable part of the study of plant taxonomy, as well as one of the most important parts of the work of a systematist. One who has not seen and looked at the plants as they grow is at a distinct disadvantage. M. L. Fernald, who made a considerable reputation as a systematist, was himself an enthusiastic and prodigious collector. One of his former students quoted Fernald to me as having said that no one could be expected to have a wide knowledge of plants until he had collected over 10,000 numbered specimens.

Turner (1998) noted that Barton had collected over 26,000 numbers in Trans-Pecos Texas, which would suggest that he knew the flora of that area pretty well. My

own lifetime total is not far from the same number, though they have been more widely scattered geographically. In other respects, I think, we were collectors cut from different cloths, perhaps unconsciously expecting our specimens to be useful to different researchers.

General collectors must choose (sometimes daily) between the snatch, grab, and run method that results in 200 often poorly documented and prepared specimens in a day, and a slower and more tedious day that yields perhaps 50 specimens that will be the joy of future investigators. In the years around 1850, when Charles Wright collected in Trans-Pecos Texas, any scrap of a specimen was valuable and, if identifiable, very probably represented a species new to Science. Regardless of the quality, herbaria clamored for the duplicates, because they had no other specimens of those species. Now, a hundred and fifty years later, when many herbaria are crowded to the eaves because of the coetaneous appearance of industrious collectors and when most areas are much better known, the herbaria are much more selective. Nevertheless, the tradeoff between collecting *everything* and collecting fewer species *well* is still a basic part of general collecting.

I was brought up in the snatch-and-grab school, in a part of the United States that rejoiced in pretty good local floras going back to the 18th century. My mentor said, "don't throw anything away—we need all the local records we can get". What he did not say was, "take your time, keep looking for a good specimen with flowers and fruits or preferably both, and then we [the herbarium PENN, as it happened] will not have to use valuable space for junk". I continued collecting in the same happy-go-lucky way for some 15 years and more than 10,000 numbers (including several thousand made jointly with other collectors). Then in 1945 Dr. Lundell brought me up sharply with instructions to produce sets of specimens of a certain quality,

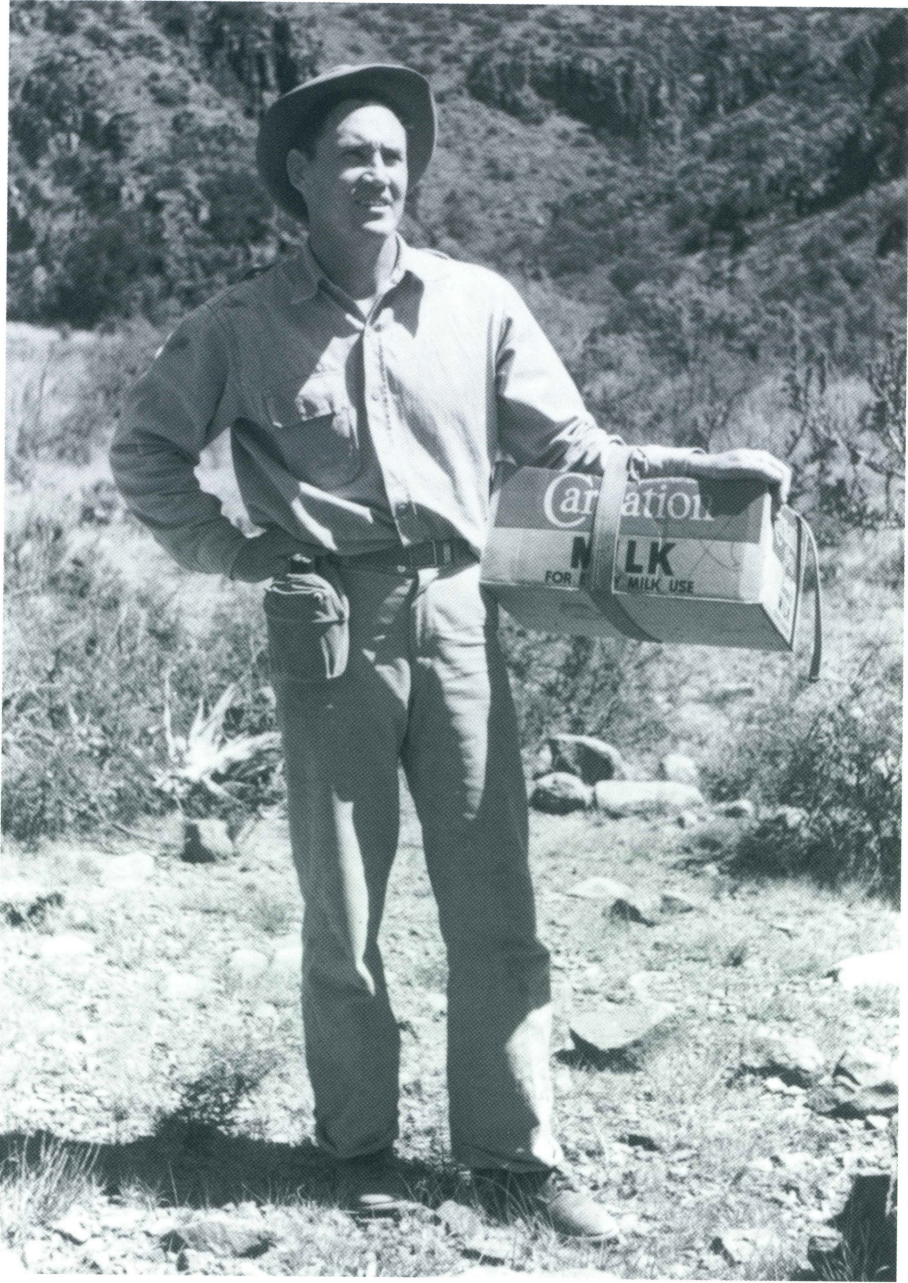


Fig. 1. Barton Warnock in the field in West Texas (probably in the canyon of Limpia Creek near Wild Rose Pass), April 1947. Photograph by Rogers McVaugh, published by permission of the Hunt Institute for Botanical Documentation.

rapidly heat-dried by a method he had used successfully in the tropics. I soon came to the opinion, which I still cherish, that (with some exceptions) specimens unacceptable to him were not worth collecting.

So two years after my introduction to Texas and to C. L. Lundell's methods, my assistant and I were back in the Trans-Pecos trying to collect in large sets for exchange from the University of Michigan. Naturally, we were trying to find plants in perfect condition and in abundance. Perhaps rather too often we passed over individual plants that seemed to be atypical, or somewhat past flower, or damaged by cattle and insects. Equally often, later in the day, when we found no better material, we deplored the fact that we had no collections of that particular species, merely because we had disdained to pick it up when we had the chance. At the same time we often found that Barton Warnock, our field companion, had usually collected the ones we had passed over.

Barton had a rule that never failed him. He told us, "The time to collect it is when you see it. If you wait for a better one you may never see the same species again, in any condition. It may be a rare plant—perhaps that is why you only saw one. If you do see a better one, of course you can discard the first. Whatever the reason, don't wait for the next one; collect it when you see it!"

It was not long before Alton and I were calling this "Warnock's Law." Over the years since then, I have tried to instill in my students a great deal of respect for

Warnock's Law, which is after all a part of the general law from which come proverbs like "Opportunity knocks but once!" Nevertheless, I like to remember Warnock's Law as one particularly applicable to field botanists and enjoying a certain priority in nomenclature. It is, after all, older than the International Association for Plant Taxonomy, and a year older than the word "taxon."

Warnock's Law reminds us to keep our goals always in mind, to be alert for new stimuli of all kinds without neglecting the commonplace, to avoid procrastination as well as undue haste when either may lead to loss of quality. In short, to blend happily the broad coverage of the general collector with the more specialized interests and needs of a monographer or any researcher who works with floras that are largely unstudied. I never knew the older and somewhat embittered Barton Warnock of whom Billie Turner wrote in the closing paragraphs of his essay. I shall always remember him as the young botanist that I see in my photograph, a good friend with a zest for life, a wry humor, and always ready to collect them when he saw them.

#### LITERATURE CITED

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