

## The Search for Wild Gaura, Part II

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Last issue I described how Dr. Anderson and I arrived in Texas and our first successful attempt to find Gaura in the wild. I talked about our northern portion of the trip and ended with our exciting discovery of diploid *G. coccinea*. Now here is the thrilling conclusion in our search for wild Gaura.

We had collected *G. coccinea* seed at a rest area close to Alpine, Texas and from there we continued down along the border. We thought about stopping in Mexico since we were so close but decided not to, since we were short on time – Texas is a huge state and it takes a lot of driving to get from one place to another! We spent more time in the truck driving around than actually looking for plants. I think we drove about 3000 miles in 5 days! Of course, since we were so close to Mexico, we had to drive through one immigration checkpoint. This was an interesting experience; you are driving along at 55 mph and suddenly have to slow down and stop in the middle of nowhere because the government is trying to keep illegal aliens out of the U.S. So we stopped

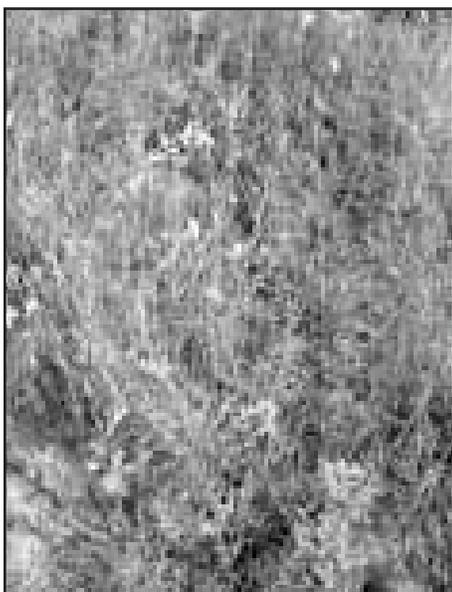


Figure 2 *Gaura villosa ssp. parksii*

and had a couple of cars in front of us, so we watched the officer talk to the drivers in each of those cars. I was driving at the time, so got to answer the questions he asked. I think he just asked where we were coming from and where we were going, and then waived us on. This just doesn't happen in Minneapolis! By this time we were heading towards Houston, which is in the eastern part of Texas. One of our sites was at a rest area south of San Antonio (our starting point). We couldn't tell if it was the northbound or southbound one we needed to stop at, so we started with the northbound one. We were looking for *G. sinuata*, which we hadn't seen yet. Instead, we found an entire field of *G. villosa*! This was another plant that wasn't included in our list, but we decided to stop and collect it anyway. The neat thing about this plant is it has really fuzzy leaves.

As we got closer to Houston, the humidity increased. Western Texas is very dry, so the days weren't all unpleasant, especially in the mornings and evenings, though it did get quite hot. But Houston was extremely humid! *Gaura lindheimeri* is native to the coastal areas of Texas, so we had to travel there to collect native populations. The first site was far enough away from the ocean to not be unbearable. This site was next to a railroad, and we actually spotted the plants as we were driving down the road at 55 mph! Actually, this is not so surprising, since wild *G. lindheimeri* can grow from four to six feet tall or more. We pulled over and tromped to where we saw probably more than a hundred plants scattered along the roadside. But before we could get to them, we had to cross a wet, muddy ditch! It was just wide enough that if we stomped the grasses down and jumped as far



Figure 1 Dr. Anderson standing by wild *Gaura lindheimeri*

across as we could, we barely landed in the water. Try doing that with a laptop, baggies, seed packets, and measuring equipment in your hands! This time, since we had so many plants to choose from, we collected our data on the first five plants and then chose another ten to collect plant material from. We decided to collect as wide an assortment in flower size, color, and shape as we could, especially since this was for our breeding germplasm. We also found some plants that were different enough that we thought they might be a different species, and collected plant material from a couple of them. By this time we were hot and tired and decided it was time to head on for Houston and our final sites.

The first of these sites we almost missed, and we decided not to stop because the plants we did see were in a construction zone. They will soon be gone and replaced by an expansion on the road we were driving down. Sad as this may be, that road really needed to be expanded! Another reason we decided not to stop was because traffic was pretty heavy and we still had one more site to visit before we stopped for the night. Our last site was completely gone and

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Figure 3 Our route through Texas. The stars indicate collection sites for *Gaura*

replaced by residential area, but we found several plants a couple miles down the road on a hillside above the highway. We stopped there and set up camp, and were almost eaten alive by mosquitoes! So after we had doused ourselves with bug spray we set to work. This time the plants were taller than either of us! I could barely reach the top of the shortest plants. We quickly took our data and collected plant material and seeds because the mosquitoes were still biting and it was getting dark.

We had a very interesting and successful trip. The cuttings were rooted and are growing in the greenhouse now. They were planted in the field last summer to see how well they do in Minnesota. We have set up crosses within the different *G. calcicola* plants which we think are promising, and between the different species and some cultivated *G. lindheimeri* plants already in our breeding program. As mentioned earlier, I am screening the *G. coccinea* populations along with the populations collected in Minnesota and California to determine chromosome numbers and morphological characteristics common to the different ploidy levels.