

## THE OKLAHOMA BOTANICAL TRAVELS OF G. W. STEVENS

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George Walter Stevens (1868-1936) became one of the early teachers and botanical explorers in Oklahoma. Between 1904 and 1912 he was a biology teacher at the State Normal School (now Northwestern Oklahoma State University) at Alva. In 1913 Stevens directed the State Botanical Survey (1). At this time Stevens traversed the state, compiled a list of over 1600 species, and accumulated thousands of specimens, over 4500 of which were later deposited at the Bebb Herbarium at the University of Oklahoma. The plants found during these major collecting explorations in 1913, along with those collected by Stevens in 1914, and by others, were later used as data for Stevens' doctoral dissertation on the flora of Oklahoma completed in 1916 at Harvard University. Although Stevens' lengthy dissertation was never published, this work was a very comprehensive study of the flora of the state, far more so than any before it. Upon completion of his graduate work, he joined the Department of Biology at Missouri State Teachers College in Warrensburg, where he stayed the remainder of his career.

Our interest was in Stevens' collecting trips made in Oklahoma. We were interested not only in what he collected, but when and where. Inasmuch as neither of the schools where Stevens taught had any knowledge of his collecting books, nor did his family, the labels on the over 4500 herbarium specimens constituted the main source of information to reconstruct his itineraries. A few additional references to specimens not in the herbarium were found in the taxonomic literature. Helpful clues were also found in the original copy of Stevens' dissertation now on deposit at the Widener Library at Harvard University.

Stevens (2) stated that he was in the field almost continuously from April 6, 1913 to September 20, 1913. Mr. R. W. Chesnut, then of Waynoka, Oklahoma, accompanied him from April 6 to June 25. From July 1 to September 15, Mr. S. C. Brooks, then of Amherst, Massachusetts, was in the field with Stevens. Both men, Chesnut and Brooks, assisted Stevens the latter part of August. During these months Stevens and his companions collected extensively throughout the state, with the exception of the extreme southeastern group of counties. Stevens was frequently in little-known territory where few or no collectors had preceded him. For example, Stevens was probably the first collector to explore the Red Rock Canyon near Hinton. Likewise, he was the first or second to collect in the Black Mesa area in the extreme northwestern corner of the Panhandle and the second or third to collect at the Glass



FIGURE 1. G. W. Stevens (Photograph courtesy of Dr. Anna B. Fisher).

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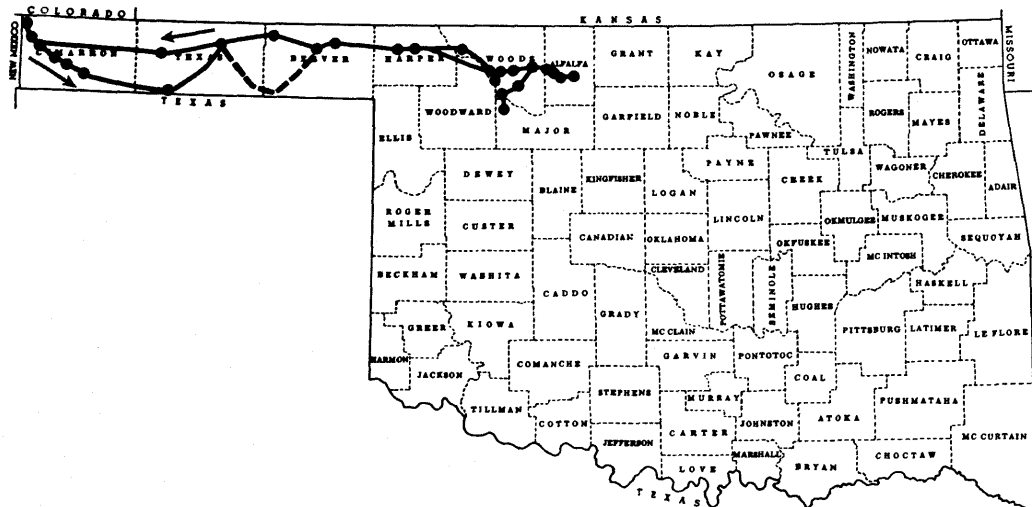


FIGURE 3. Route of Stevens' collecting trip in May, 1913.

TABLE 2. May collecting trips<sup>a</sup>

Date	Locality	County
May 1	Alva	Woods
May 2	Freedom	Woods
May 3	Hornbecks	Harper
May 4	Buffalo	Harper
May 5	Doby Springs	Harper
May 5-6	Knowles	Beaver
May 8-10	Beaver City	Beaver
May 10	10 mi. s. of Liberal, Kansas	Beaver
May 10	Hooker	Texas
May 10-12	Camp	Texas
May 13	Mineral, Kenton	Cimarron
May 14-15	Kenton, Black Mesa, Fern Canyon	Cimarron
May 15-16	Mineral, 20 mi. nw of Boise City, Doby, Marella	Cimarron
May 17	Texhoma <sup>b</sup>	Texas
May 19	Knowles	Beaver
May 20	Buffalo	Harper
May 21	Saratoga, Freedom, Cora	Woods
May 22	Alva	Woods
May 23	Alva, Avard, Waynoka, Ziegler	Woods, Major
May 24	Cherokee, Great Salt Plains, Ingersoll, Ashley	Alfalfa
May 26-27	Alva	Woods
May 28	Alva, Cora, Whitehorse, Freedom, Fairvalley	Woods
May 31	Whitehorse	Woods

<sup>a</sup>About this trip Stevens (2) commented, "... we made a trip from Alva westward through Harper and the Panhandle counties; 291 numbers were collected on this trip."

<sup>b</sup>From here Stevens (2) indicated that he traveled back to Hooker and then turned southeast through Texas Co. into southwestern Beaver Co., but no collections are known to us from this area. The dashed line in Figure 3 indicates this area.

"A" and "B" labels, but mostly the procedure was consistent.

The herbarium at the University of Oklahoma has specimens collected for Stevens by Blakley in 1914 and 1915, Clifton in 1913 and 1914, Houghton in 1916, and Young in 1914. Additional collectors include O. S. Coble, Pittsburg Co. in 1913; Florence Griffith, Johnston Co. in 1915 and 1916; and M. Keyser, Logan Co. in 1916. These latter collectors were perhaps those Stevens (2) mentioned as having "sent in a few specimens each..."

From these collectors and the three herbaria mentioned previously, Stevens had access to an additional 1447 specimens from Oklahoma.

In his dissertation remarks were made concerning the abundance and distribution of several species. Many of these species which Stevens said were "to be expected" have either since come into the state or been found as natives. For example, Stevens (2) stated that *Lamium amplexicaule* "should be expected in waste places, eastern half of the state." Interestingly, this species' first documented collection in the state was made in April, 1916 from Cleveland Co., according to specimens in the herbarium at the University of Oklahoma. By 1927 the species had been collected in the eastern

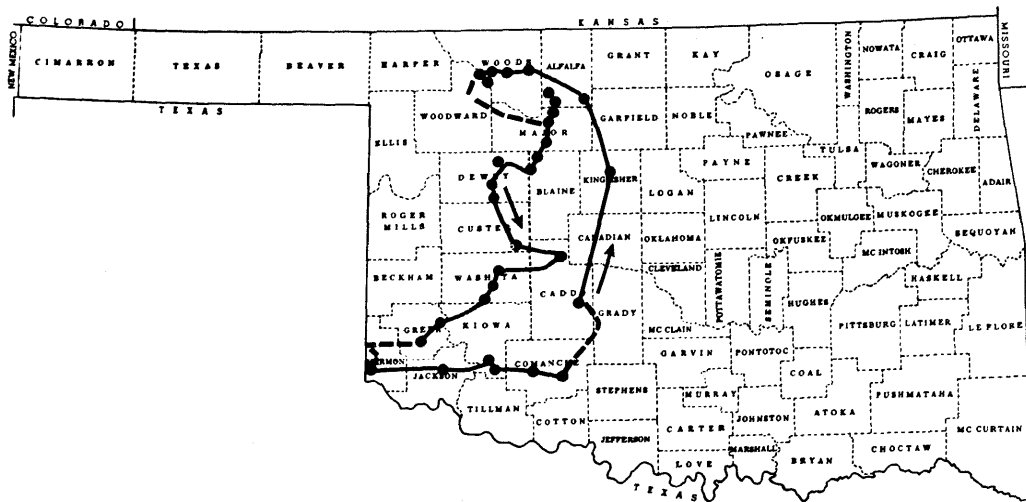


FIGURE 4. Route of Stevens' collecting trip in June, 1913.

TABLE 3. June collecting trip<sup>a</sup>

Date	Locality	County
June 1	Alva, Cora, Whitehorse, Freedom, Fairvalley	Woods
June 2-7 <sup>b</sup>		
June 8	Orienta, Cleo, Augusta, Aline	Major, Alfalfa
June 9	Longdale	Blaine
June 10	Canton	Blaine
June 11	Canton, Longdale, Fairview <sup>c</sup>	Blaine, Major
June 11	Between Canton and Seiling	Dewey
June 11	Between Seiling and Taloga <sup>d</sup>	Dewey
June 13	Putnam	Dewey
June 14	Weatherford	Custer
June 15	Devil's Canyon near Hinton	Caddo
June 16-17	Bessie, Cordell, Rocky, near Granite	Washita, Kiowa
June 18	Granite, Mangum <sup>e</sup>	Greer
June 19-22	Hollis	Harmon
June 23	Hollis, Altus, Mt. Park, Snyder	Harmon, Jackson, Kiowa
June 24-25	Cache	Comanche
June 26	Lawton <sup>f</sup> , Anadarko	Comanche, Caddo
June 27	Dover	Kingfisher
June 28	Goltry	Alfalfa

<sup>a</sup>As to this trip Stevens (2) stated, "June was spent in a tour of several of the southwestern counties; 819 numbers were collected in 15 counties."

<sup>b</sup>Stevens (2) indicated a swing through northeastern Woodward Co. and thence down the Cimarron River in Major Co. to Orienta. There are, however, no specimens available for this time and no gaps in his collecting numbers. A dashed line in Figure 4 indicates this area.

<sup>c</sup>According to the sequence of collecting numbers, Stevens appears to have retraced his route to Fairview on June 11.

<sup>d</sup>No date was given for this locality, but June 11 is likely for geographical sequence.

<sup>e</sup>From here Stevens (2) indicated that he traveled near the 100th Meridian at a point near Madge in Harmon Co., but no specimens are known from here. A dashed line in Figure 4 indicates this area. Also, his collecting numbers for the plants from Granite, Mangum, and his next site, Hollis, do not show any gaps.

<sup>f</sup>Stevens (2) indicated that when he left Lawton he went eastward into Grady Co. on his way to Anadarko; however, no specimens are known to us from this county. Very possibly, the only route between the two towns that was feasible to travel on was via Chickasha. A dashed line in Figure 4 indicates this route.



FIGURE 5. G. W. Stevens (center) collecting in the Wichita Mts. in 1913. Pictured also is one of Stevens' assistants, likely R. W. Chesnut, and Dorothy Van Dyke, who later became a botany graduate student at the University of Oklahoma and in whose yard Stevens camped while collecting in the Wichitas. This photograph is courtesy of Dr. Dorothy Van Dyke Leake.

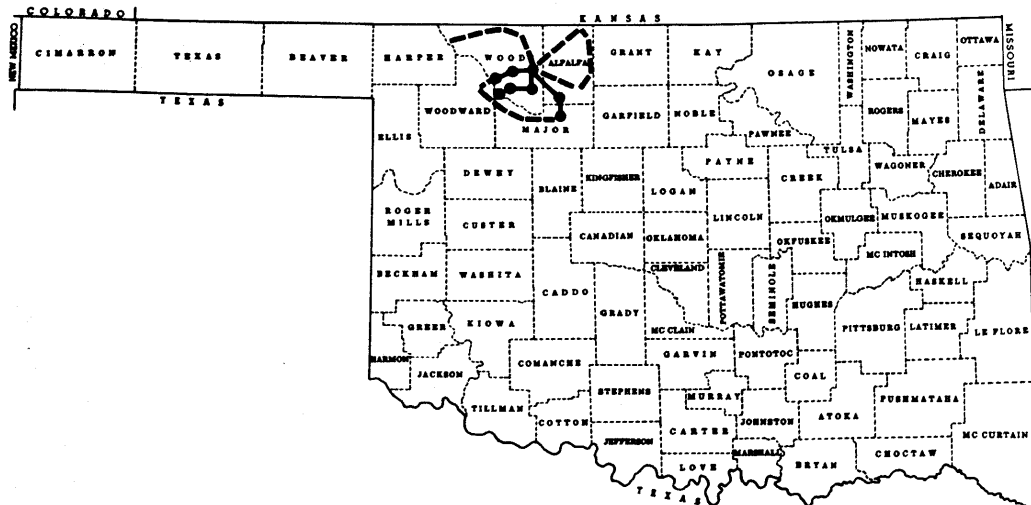


FIGURE 6. Route of Stevens' collecting trips in July, 1913.

TABLE 4. July collecting trips<sup>a</sup>

Date	Locality	County
July 2	Alva	Woods
July 3-6 <sup>b</sup>		
July 7	Alva	Woods
July 8-9	Alva, Hopeton	Woods
July 10	Fairvalley, Cora	Woods
July 11	Alva	Woods
July 12	Hopeton, Avard	Woods
July 14	Alva	Woods
July 15	Fairvalley <sup>c</sup>	Woods
July 19	Cleo, Aline	Major, Alfalfa
July 20	Cleo	Major
July 23	Alva	Woods
July 24	Waynoka	Woods

<sup>a</sup>Pertaining to these trips Stevens (2) stated, "... several local collecting trips were made into Woods and the adjacent counties. During that month 546 numbers were collected and the floras of the Gypsum Hills, Salt Plains, and Sand-hills were studied."

<sup>b</sup>For these four days we have no record of any collections. Stevens (2) indicated that at some time in this month, perhaps now, he followed the Salt Fork of the Arkansas north and west from Alva to what appears to be Plainview near the Woods-Harper County line. Stevens (2) also indicated that during July he left Alva and traveled to the northeast corner of Alfalfa Co. turning south along the Alfalfa-Grant County line to a point near Jet where he examined the flora of the Salt Plains. From there he turned northwest back to Alva. One of these trips could have been made now, the other possibly occurring after July 24. Dashed lines in Figure 6 indicate these trips.

<sup>c</sup>Again Stevens (2) indicated that he left here and traveled down the Cimarron River to Cleo. A dashed line in Figure 6 indicates this area. We, however, have no record of Stevens' collections during the time between July 15 and July 19.

part of the state. Its present known distribution is now as far west as Greer Co. in southwestern Oklahoma. Stevens' comments, such as the one on *Lamium*, are of historical value in dating the introduction of a species into the state.

A few native species which Stevens collected such as *Bartonia paniculata* and *Veratrum woodii* have only been collected once since in Oklahoma. These were collected in the 1970's by Drs. John and Connie Taylor. Other species have only been collected a few times since Stevens found them. For example, *Amianthium muscaetoxicum* has only been documented in the herbarium at the University of Oklahoma three times since 1913: twice in 1914 and once in 1930.

Stevens commented that he had found two new species during his collecting trips. The two novelties referred to are *Aphanostephus pulchellus* and *Nama compactum*. Neither name was ever published except as *nomina nuda* by Jeffs and Little (5). According to Shinnery (6), Stevens' *Aphanostephus* proved to be Buckley's *Aphanostephus pilosus*. Hitchcock (7) later named Stevens' *Nama* for him, giving it the valid name *Nama stevensii*. In addition to the plant upon which *Nama stevensii* is based, Stevens collected at least five more plants which too became type material. These are *Erigeron bellidiastrum* Nutt. var. *robustus* Cronquist, *Forsellesia planitierum* Ensign,

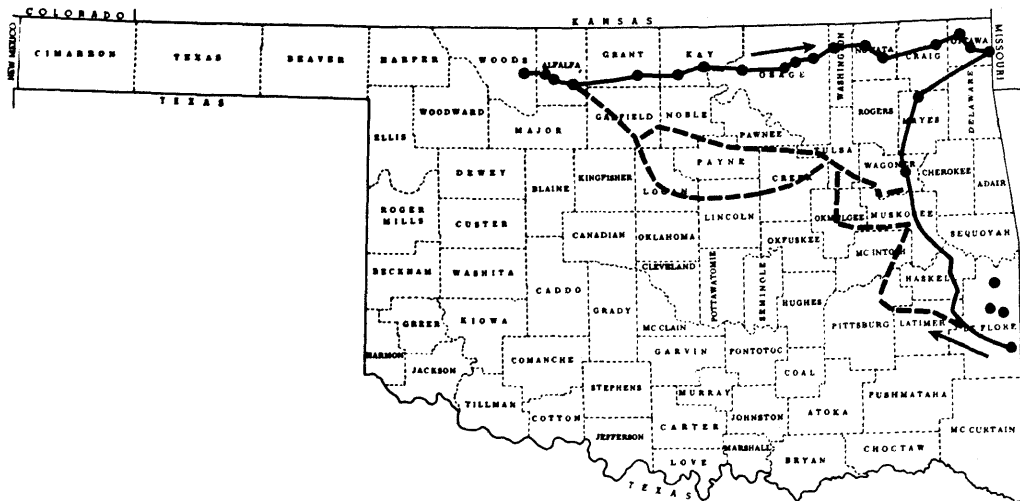


FIGURE 7. Route of Stevens' collecting trip in August and September, 1913.

TABLE 5. August and September collecting trip<sup>a</sup>

Date	Locality	County
August 1	Ingersoll	Alfalfa
August 2	Salt Plains near Cherokee, Jet	Alfalfa
August 2-3	Lamont	Grant
August 3-5	Tonkawa	Kay
August 6	Tonkawa, Ponca	Kay
August 6-8	Burbank, Pawhuska	Osage
August 9-11	Pawhuska	Osage
August 12	Meyers, Pawhuska	Osage
August 15	Okesa, Copan	Osage, Washington
August 17-18	Copan	Washington
August 19	Lenapah	Nowata
August 22	Childers, Blue Jacket	Nowata, Craig
August 23	Blue Jacket	Craig
August 24-26	Miami	Ottawa
August 27	Miami, Ottawa	Ottawa
August 29-30	Miami, Ottawa, Hattenville	Ottawa
September 2	Adair	Mayes
September 3	Wagoner, Blackstone, Verdard <sup>b</sup>	Wagoner
September 5	Panama <sup>c</sup>	LeFlore
September 6-10	Page, Rich Mt.	LeFlore
September 11	Wister, Howe <sup>d</sup>	LeFlore
September 20, 24, and 28	Alva <sup>e</sup>	Woods

<sup>a</sup>With regard to this trip Stevens (2) commented, "August and about half of September was spent in a trip from Woods county through the northern tier of counties to the northeastern corner of the state, and thence southward as near the eastern line as the country would permit us to travel to within one county of the southeastern corner. Collections were made in 20 counties and 1019 numbers were taken."

<sup>b</sup>Stevens traveled from here through eastern Muskogee, Haskell, and Latimer Counties; however,

we have no record of collections until he reached LeFlore Co.

<sup>c</sup>Stevens does not indicate that he collected here, but specimens are recorded for this site.

<sup>d</sup>Again Stevens does not indicate that he collected here, but specimens are available for these two sites.

<sup>e</sup>For Stevens' return trip to Alva as indicated by the dashed line in Figure 7, we have no specimens except one collected near Morrison, Payne Co., on September 11. Another specimen collected on September 12 in Purcell, McClain Co., is at hand, but Stevens was not in McClain Co. in September.

*Lactuca canadensis* L. forma *stenopoda* Wieg., *Lechea villosa* Ell. var. *macrotheca* Hodgdon, and *Monarda punctata* subsp. *occidentalis* Epling.

Little is known about Stevens' collecting activities except for those described above. After going to Missouri State Teachers College, it is known that he collected at least a few plants in the immediate area. An interesting item, of which we know no more, is the statement that he collected plants for Oklahoma in Alaska in 1908 (1).

In the slightly over three years of botanizing in Oklahoma, Stevens' contributions to our knowledge of the flora of the state were remarkable.

## ACKNOWLEDGMENT

Mr. Michael Canoso of the Gray Herbarium, Harvard University, provided us with much valuable information from the copy of Stevens' dissertation in the Widener Library.

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