Thomas Nuttall's Botanical Collecting Trip to the Red River, 1819

S. W. Geiser

I

In the middle of May, in the year 1819, Thomas Nuttall, British-American botanist, joined a small military party under Major William Bradford, U.S.A., to go from Fort Smith, Arkansas, to the Red River, in present southeastern Oklahoma, then the "Arkansas Territory." For three weeks previously (or from April 24, 1819) Nuttall had been collecting plants in the neighborhood of Fort Smith on the Arkansas River. The journey itself, from Fort Smith to the Red River, lasted about a week. It led the military party south of Fort Smith to Sugarloaf Mountain in present LeFlore County, Okla., then southwesterly, crossing, in turn, the Poteau River, the Fourche Maline, the Winding Stair Mountains, the "great cove or prairie" of the Kiamichi River, the Kiamichi Mountains and rocky highlands south and east of the Kiamichi, and thence southerly to the Red River prairies and the sites of present Doaksville, Fort Towson, and Jonesboro. The party then crossed the Kiamichi near its confluence with the Red River, and ascended the left bank of the river to Horse Prairie on Horse Creek, a distance of about fifteen miles. Two days later, members of the party started on their return to Fort Smith; but Nuttall in his eagerness to collect became separated from them, lost his way, and was obliged to remain some three weeks on the Red River prairie, making extensive plant-collections. An opportunity offering, on 14 June he set out for Fort Smith with three settlers from the Jonesboro community.

It might appear that another account of this well-publi-
Thomas Nuttall's (1819) Route from Fort Smith and Return. Solid line shows the route taken to the Red River (May 16-22); broken line shows the return route to Fort Smith (June 14-21). Arrows indicate general direction; and camp-sites are numbered by days of the month.
Travels into the Arkansa Territory . . ." [2 October, 1818–18 February, 1820], a duodecimo of 296 pages, printed and published by Thomas H. Palmer of Philadelphia. So excellent and informative is this narrative that R. G. Thwaites in 1905 reprinted it *literatim* as volume XIII in his "Early Western Travels, 1748–1846." The 1821 issue (as well as reprint) was accompanied by a map (H. S. Tanner) "constructed from [Nuttall's] original manuscripts." Accomplished though Tanner was as a cartographer, Nuttall was not, and the map deserves to be recognized as one of American map *curiosa*. Although in it the mountains may be (and are) misplaced, with the streams running toward the wrong points of the compass, and in other ways the map wholly incorrect, still one with a good modern base-map of the area and an intimate knowledge of its topography, is able to chart with some degree of accuracy the route taken by Nuttall's party, both on the route to the Red River and on the return.

There certainly is need for such an accurate delineation, for even modern historians have woefully misapprehended Nuttall's routes. Thus, Dr. Rex W. Strickland (1940, p. 31) has Nuttall's party travelling from Fort Smith through the Arbuckle Mountains on the way to the mouth of the Kiamichi; Thwaites (1905, p. 209n) states that they were the Sans Bois Mountains, which Nuttall's party crossed after leaving the Fourche Maline, to get into the "great cove of the Kiamichi," while even the most elementary student should know that the mountains crossed were the Winding Stair, in west-central LeFlore County, and the Sans Bois Mountains are in Haskell County, some thirty miles north of where the crossing was made. And even so careful an historian as Grant Foreman, in his "Advancing the Frontier" has marked routes on his map that are hopelessly incorrect.

The fact that in the period before the Civil War there were three military roads between Fort Smith and Fort Towson (established in 1824) has given rise to confusion in the minds of those unacquainted with the routes. Further remarks here on this point, I fear, would lead to obfuscation. Suffice it to say that although one knowing intimately the country traversed grasps clearly the route followed, from Nuttall's limpid account, it is well to clarify and plot the routes taken, and set down the positions at which the parties
camped at nights. This is the ostensible justification for the present paper.³

As the text of Nuttall’s journal is readily accessible, and as Palmer, Pennell, and Mrs. McKelvey have summarized well the events of Nuttall’s journey, I omit these here. Map I here produced shows both the general trends and nearly the exact routes of Nuttall’s journey, and to this map the reader is referred. The military party was in *LeFlore County during the nights of May 16 to 18, and crossed over into *Pushmataha County on the 19th; they camped on the night of 21 May near the north county-line, in *Choctaw County. They camped the night of 25 May at Horse Creek (shown on the map as the westernmost point of Nuttall’s collecting), and turned back on the morning of 26 May for the return to Fort Smith. There the military party probably arrived on 31 May; but as Nuttall was no longer with that party, our interest therein is but secondary.

Nuttall remained in the Red River prairie until 14 June, when with three companions⁴, settlers at Jonesboro on the Red River, he set out for Fort Smith. Quite unwillingly, they found themselves (under circumstances outlined in the following section) obliged to follow up the Kiamichi valley until they came to *Clayton. They then journeyed eastwardly across the Kiamichi prairie, crossed the *Winding Stair Mountains on 19 June, and finally reached Fort Smith about noon on the 21st, three weeks after the return of the military party under Major Bradford.

Having covered the generalities of Nuttall’s trip to the Red River with the aid of Map I, I now proceed to particularize the course of his journey.

*In this and the following section, modern geographic names, not known at the time of Nuttall’s visit, are preceded by an asterisk (*).

³Muriel Wright’s (1981) paper on “State Wighwa:, No. 10” In the Chronicles of Oklahoma points out some of these military trails and roads from Fort Smith to Fort Towson; and to her paper the reader is referred. Besides that followed by Major Bradford, she mentions “the first definite trail” marked out in 1826, two years after the establishment of Fort Towson; the Bean-Stuart military road of 1832-34; and finally the survey of a new road in 1838.

⁴Most certainly one of Nuttall’s companions was Amos Kuykendall, later of Austin’s Colony in Texas; the other two may have been Captains Nathaniel Robbins and James Bryan. The Kuykendalls lived on the north side of Red River, near William and Samuel Gates (on Gates’ Creek, which Nuttall mentions in his journal.)
May 16. Left Fort Smith, passing over *Massard's Prairie and *Long Prairie (to the west of "Cedar Prairie," which lay about 8-10 mi. SE of Fort Smith, in the Vache Grasse Creek valley). At *Gap Creek, abt. 2 mi. due S of *Slaytonville, Ark., they left present Arkansas (Sect. 29, T5N,R33W); and entered present Oklahoma (then a part of "Arkansas Territory") in Sect. 15, T7N,R27E. They camped the night on the N side of Gap Creek, in Okla., T7N,R27E. (Fort Smith Topographic Sheet, U.S.G.S.; Sebastian Co., Ark.)

May 17. To the SW, crossing Gap, *Nail, Sugarloaf, and *Morris creeks (and several smaller westward-flowing branches of the Poteau River) and then crossed, toward evening, the Poteau itself, just above the mouth of *Caston Creek, abt. 2 mi. E of

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6United States Geological Survey Topographic sheets are here referred to; they are listed on p. 69. Most of those used in this study have their original surveys going back a half-century. They are somewhat uneven in the quality of topographic work done; but I have found them more useful for my purpose than the Oklahoma State Highway county maps.
*Wister, and abt. 15 mi. below the mouth of the Fourche Maline (an eastward-flowing branch of the Poteau). They then proceeded abt. 5 mi. due W and camped in the valley of Caston Creek near *Victor, in *LeFlore County (T6N,R24E). (Fort Smith, Sallisaw, & Winding Stair sheets; LeFlore Co.).

May 18. They journeyed SW, crossing diagonally the E-W sandstone hills that separate the valleys of Caston Creek and Fourche Maline; crossed the Fourche and followed its valley to the mouth of *Holston Creek, up which they then proceeded. Arriving at the fork of the Holston, they took the W branch (later called the "Little Holston"), and followed its valley W for about 5 mi. They then turned abruptly to the S, and proceeded up and crossed the *Winding Stair Mountain by a steep, tortuous, and rocky path in the SE ¼ of T4N,R22E; and came to the headwaters of *Birney Creek (which later joins *Buz­zard Creek and empties into the Kiamichi, on the S border of the township). This was in the "great cove or prairie of the Kiamichi" (which is here from 8 to 10 mi. wide, at its widest part). Here they camped, and hunted buffalo. (Winding Stair and Tuskahoma sheets; LeFlore Co. Their camp was set probably abt. 4 mi. E and 2 mi. S of *Talihina).

May 19. They did not continue S to the Kiamichi, but turned sharply to the WSW, crossed *Rock Creek, and took a trail that probably came very close to the meeting-point of *Latimer, *LeFlore, and *Pushmataha counties. From this point they proceeded in a SSW direction on a buffalo trail that followed some creek beds and skirted the Potato Hills, near the N line of present Pushmataha County—a trail that is followed by a county road extending from *Albion to *Old Tuskahoma, and beyond to the SW and NW. When they came to about Sect. 18, T2N,R20E, they turned sharply S and SW to the site of (later) *Spring Station, on the *Old Military Road from Fort Smith to *Fort Towson. (The springs were near present Tuskahoma, on the Kiamichi River and 'Frisco railroad.) Here they forded the Kiamichi,
RELIEF MAP OF THE PART OF OKLAHOMA TRAVERSED BY NUTTALL, 1819. . . Slightly reduced from W.A.C. 407, U.S. C. & G. Survey, 21. ed., rev. Aug., 1954.—Scale of original map 1:1,000,000, reduced 6% in the engraving.) Contour-interval 1000 ft., numbered; 2000-ft. contour drawn, but not numbered. The scaled meridian of the map is 95° W. Long.; the two intersecting scaled parallels are those of 35° and 34° N. Lat. Scaling is in minutes. U.S. Hwy. 271 and the St. Louis & San Francisco R.R. ("Frisco") parallel each other from Poteau to Tuskaoma. The railroad crosses the Winding Stair Mountains (near the 95th Meridian) at a point further west than does U.S. Hwy. 271 (which roughly approximates the route taken through the mountains by Bradford’s party), while several miles to the east is the valley of Bohannon Creek, up which Nuttall’s party ascended the mountain on the return journey.

Spirit-leveling by the U.S.G.S. of some of the towns encountered in the descent to the Kiamichi from the Winding Stair Mountains indicates roughly the slope across the "prairie of the Kiamichi" [expressed to the nearest foot]: Talihina (674), Albion (656), [but within a mile of a 1000-ft. contour], Tuskaoma (569), Clayton (575). Within a mile of Tuskaoma, the 1000-ft. contour of the Kiamichi Mountains is found.

A useful map including the same area, but on a scale of 1:500,000 (S.A.C. R6.—"Little Rock"—U.S. C. & G. Survey) has a contour-interval of 500 feet, beginning with the 1000-ft. contour, with the 1000-, 1500-, and 2000-ft. contours often numbered.
and camped the night in the SE ¼ of T2N,R19E, about 2 mi. W and ½ mi. S of Tuskahoma. (Tuskahoma sheet; Pushmataha Co.)

May 20. They proceeded down the left bank (south side) of the Kiamichi, through cane-brakes and briar-tangles that made going most difficult, until they came to the place where the river valley abruptly narrows, and the Kiamichi Mountains approach so near the river as to make the valley almost impassable (Sect. 7, T1N,R19E). Here, taking advantage of a buffalo trail leading up the ravine of *Peal (or *Hurd) Creek, they started to ascend the Kiamichi Mountains. They proceeded, first SE and then S, until they came (Sect. 33, T1S,R19E) to a steep ravine on one of the head branches of *Cedar Creek, abt. 11 mi. E and 2 mi. N of *Kosoma. They continued SW down the “gently rolling prairies” of Cedar Creek, and camped the night of May 20 in a place not far from Sect. 20, T2S, R18E. All this day and the next Nuttall collected feverishly plants new to him. (Tuskahoma & Antlers sheets; Pushmataha Co.)

May 21. They proceeded today over the highlands more S than SW, crossing the headwaters of *Rock Creek and *Possum Creek, and from a hill bordering the latter, beheld the valley of the Kiamichi some 4 mi. to the west. From this point they turned sharply to the S and E, crossed the head of *Spencer Creek, and camped the night on the headwaters of that creek, within a few miles of site of *Old Spencer Academy (in T5S,R19E). (Antlers & Alikchi sheets; Pushmataha & Choctaw counties.)

May 22. Continuing for several miles to the SE, they struck a well-worn trail that led them to the camp of William Styles, Sr., not far from *Doaksville, and abt. 4 mi. from *Fort Towson on Gates Creek. Here they had breakfast. From Styles’ place, the Major’s company viewed Mound Prairie on the Texas side, opposite the mouth of the Kiamichi, and then proceeding SE, crossed Lemmons [Doaksville] Creek, and visited the Clear Creek settlements (Jonesboro) on both sides of the river. The Major’s mission was to
give official warning to the settlers north of the Red River, and west of a line connecting the sources of the Poteau and Kiamichi rivers, that they were to be dispossessed, since it was the intention of the government to clear that area for a projected Indian Territory (anticipating the Treaty 1820 of Doak's Stand). Evidently the company camped the night near the Red River, and spent most of that and the next day in visiting the settlements with the official news. Nuttall had here a chance to collect in the Red River plains on the south border of Choctaw County. (Alikchi, Kiomatia, & Millerton sheets; Choctaw Co.)

May 23. Leaving the vicinity of the Red River settlements east of the Kiamichi, the company late in the day crossed in boats the Kiamichi River, near its mouth, swimming the horses (Sect. 7, T7S,R20E). They camped that night only a few miles from the crossing, in T7S,R19E. The ground was low and swampy, especially on the W side of the Kiamichi crossing, which made going difficult. (Kiomatia & Frogville sheets; Choctaw Co.)

May 24. They proceeded on their way to Horse Prairie—a level plain somewhat subject to overflow, on Horse Creek (Sect. 1, T8S,R17E). On their way, they had breakfast at Martin Varner’s place, not far from *Frogville. In the 15-mile distance from the Kiamichi to Horse Creek, they crossed *Goodwater and *Carney creeks, and then camped on a 20-ft. bench above the Red River, at the mouth of Horse Creek. (This point is about 1.8 mi. from where present U.S. 271 and the 'Frisco railroad cross the Red River.) They remained at Horse Prairie the nights

On 15D1818, President James Monroe directed Secretary of War Calhoun to issue orders to prevent extension of the settlements on the Red River, and on the Arkansas above the mouth of the Poteau. This was because of a “late treaty with the Quapaws and Osages.” No settlements above the mouths of these two rivers were to be allowed, nor in the body of (present) Oklahoma west of a line joining the sources of the Kiamichi and Poteau. On 5Ja1819, General Andrew Jackson, commanding-officer of the U.S. Army, stationed at Nashville, addressed an order to Major Bradford, to remove all the settlers who might be in the prescribed areas. Bradford found on the Red River about 200 families on the west side of the lines designated; some had growing crops, others had none. “I read the order which I had received to the heads of the different families, requiring those who had no crops growing to obey it immediately; and to those who had, time was allowed until October. The order was immediately obeyed; and some of those to whom I had given leave to remain till their crops were gathered were driven in before that time by Captain [..............] Combs, commanding at Natchitoches, who had received a similar order, and executed it in the district of country next to the Red River; in some instances, burning the houses and destroying the crops...” (American State Papers, Class II, Indian Affairs, v. 2, p. 557, 1834.)
May 26. The Major and the soldiers left Horse Prairie for Styles' this morning, reversing their former route, planning to camp for the night at Styles'. Nuttall collected plants on the prairies for two hours after their departure, and continued to collect plants on his delayed return journey to Styles'. So absorbed did he become in collecting the many plants new to him (and many proved to be new to science) that he overshot his goal some seven miles before he discovered his mistake. On retracing his path, night overtook him at the cabin of Daniel Davis nr. Gates Creek, and he was hospitably invited to spend the night. A mishap next morning got him to Styles' half an hour after the military party had left, they having waited a considerable time for his return. As his efforts to track and rejoin them were unavailing, he was obliged to return to Styles' and to use this place for his depôt until June 14, when with three hunters from the Red River settlements as guides he set out for Fort Smith. The days spent at Styles' were so profitable, however, that although he was almost penniless and without other resources, he could not find it in his heart to regret his having been marooned on the Red River Prairie, where he had found many new species. (Appendix.)

June 14. Left Styles' in the afternoon, traveling NWbN, and then NbE; came to near the N line of T5S,R19E, and camped on the bank of a creek (headwaters of ?Spencer Creek, abt. 3 mi. E of Old Spencer Academy). (Alikchi sheet; Choctaw Co.)

June 15. N, to near the N line of T4S,R19E, and the headwater of *Frasier Creek (branch of Spencer); discouraged by the prospect of unending NE-SW parallel sandstone ridges for 40 miles, the leader turned sharply to W, toward the Kiamichi. They camped the night somewhere in SE T3S,R18E, 4 or 5 mi. N of *Rattan. (Alikchi sheet; Pushmataha Co.)
June 16. Proceeding westwardly, in late morning the valley of *Possum Creek ("Field's Cove") now came in sight. About noon, they crossed the Kiamichi, just below the mouth of *Big Hale Creek (Sect. 2, T4S,R17E), and took a westerly course over the hills through the north tier of sections of T4S,R17E. They left the hills and descended to the river (Sect. 34, T3S,R17E), and after crossing and recrossing the Kiamichi, camped at an early hour in a small prairie on the E side of the river (Sect. 33, T2S,R16E), near present *Moyers on the 'Frisco railroad. Here they "jerked" some buffalo beef taken in the prairie. (Alikchi & Antlers sheets; Pushmataha Co.)

June 17. They followed the Kiamichi for some 25 miles, sometimes ascending the pine hills, sometimes descending to the river, which they crossed and recrossed, until they came to the mouth of Jack's Fork (Sect. 32, T2N,R19E). Here they camped the night. (Antlers, McAlester, & Alikchi sheets; Pushmataha Co.)

June 18. Across the "Great Cove of the Kiamichi" (but nearer the river than on the way out, avoiding the Potato Hills) until they came to the mouth of *Bohannon Creek (T3N,R23E), (which they mistook for *Buzzard Creek, leading up to the gap or pass in the Winding Stair Mountain, that Major Bradford's party had negotiated in the journey to the Red River). Camped the night on the banks of Bohannon Creek. (Tuskahoma & Winding Stair sheets; Pushmataha Co.)

June 19. Passing up the valley of Bohannon Creek, they reached the crest—one of the highest [2428 feet] in the Winding Stair Mountains—and finding the north slope at that place too steep for a ready descent, they passed NW along the ridge of the crest (a distance of some 3 mi.) until they came to a rocky ravine, very steep, which nevertheless offered a descent of some 2.5 mi. to the fork of Holston Creek. Here they found the tracks left by Major Bradford's return-party; and hastening 9 miles down Holston Creek, they camped for the
night in Sect. 17, T5N,R24E, after a fatiguing journey of about 20.5 miles. (*Winding Stair* sheet; LeFlore Co.)

June 20. Setting out early on the trace to the Poteau River and beyond, they rode some 21 mi. to a point abt. 2 mi. E of the Sugar Loaf peak; then turned N, and camped nr. James Fork of the Poteau (T6N,R32W of the 5th Principal Meridian⁷, and abt. 16 mi. S of Fort Smith). (*Winding Stair, Sallisaw, & Fort Smith* sheets; LeFlore Co., Okla., & Sebastian Co., Ark.)

June 21. Arrived at Fort Smith during the morning.

**Appendix I**

**RECORDS IN NUTTALL’S JOURNALS, OF PLANTS COLLECTED AT FORT SMITH, AND ON THE TRIP TO THE RED RIVER, 24Ap–21Je, 1819**

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<td>24Ap</td>
<td>Arrived at “Garrison” (Fort Smith); welcomed by Major Bradford.</td>
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<tr>
<td>141</td>
<td>24Ap</td>
<td>Bradford invited Nuttall to make Fort his headquarters, and depôt of his collections.</td>
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<td>142</td>
<td>26Ap</td>
<td>Five-mile walk up the Poteau (on eastern edge of present Oklahoma) gave several new or undescribed plants: <em>Bellis integrifolia</em> Mx. (<em>Astranthium integrifolium</em> (Mx.) Nutt., var. <em>ciliatum</em> (Raf.) Larsen); <em>Collinsia violacea</em> Nutt. (certainly) and probably <em>C. verna</em> Nutt.; large-flowered <em>Tradescantia</em> (identification hardly possible); <em>Phlox</em>, several spp.? (one sp. certainly <em>P. pilosa</em> L., the others uncertain);</td>
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⁷The careful reader will notice the discrepancies between the numbering and designation of tiers and ranges of Land Office townships in locations of night-camping places for June 19 and June 20. For Oklahoma maps, *ranges* are calculated east and west from the “Indian Meridian,” which runs through Meridian, 6 miles W of the Logan-Lincoln County line. The *base-line* from which township tiers are numbered, intersects the Indian Meridian in Murray County. All Land Office townships in Oklahoma (with exception of the Panhandle) “dress to” this meridian and base-line. In Arkansas, however, the ranges “dress” from the “Fifth Principal Meridian,” which forms, in part, the county-line between Jackson-Craighead, Jackson-Poinsett, Woodruff-Cross, etc., counties. The Arkansas base-line for tiers of townships does not at all coincide with that used in Oklahoma. Thus, Fort Smith, Ark., lies in Twp. 8N32W of the Fifth Principal Meridian, while across the Poteau, the nearest point in Oklahoma lies in Twp. 10N27E of the Indian Meridian. An added reason for using Land Office townships rather than civil townships in designating Nuttall’s camping places is the fact that some of the civil townships greatly exceed in area a Land Office township. Thus, LeFlore County has 40.75 Land Office townships and 20 civil townships; Posh-mataka County 9.5 Land Office townships and 5 civil townships; and Choctaw County 21.77 Land Office townships and 6 civil townships. Moreover, the base maps generally employed, and maps made of States which do not hold their own land (as does Texas) are built on grids of Land Office townships. This is true of all of the U.S.G.S. Topographic maps used in this study.
Verbena Aubletia L. [Nuttall certainly found his *V. bipinnatifida* there, and probably *V. canadensis* (L.) Britton]; esculent Scilla (*Camassia scilloides* (Raf.) Cory.)

143 28Ap *Maclura pomifera* (Raf.) Schneider just foliatus, in hills (6-mile walk from fort in hills east of the Poteau, on the Arkansas-Oklahoma line).


144 3My With Dr. Thomas Russell, on Cedar Prairie. *Sysirhinchium* [sic] *anceps* (*Sisyrinchium pruninosum* Bicknell); *Delphinium azureum* (*D. carolinianum* Walter var. *carolinianum*); *Ixia coelestina* of Bartram (*Nemastylis geminiflora* Nutt.); *Baptisia leucophaea* Nutt. var. *leucophaea*).


146 16My Leaving Fort Smith for the Red River, with Major Bradford and his party.

147 17My Turned from base of Sugar Loaf Mountain toward the Poteau, which they crossed late in the day. The plain full of flowers: *Delphinium azureum*; *Coreopsis* spp. (*C. tinctoria* Nutt., etc., ?—a little early for anthesis of *tinctoria*, probably the species most conspicuous was *C. grandiflora*); and “the purple Psilotria” (which I cannot find in the Index Kewensis or elsewhere—perhaps a genus and species of Verbenaceae which Nuttall forgot to describe; and Rudbeckia (not identifiable).

148 18My Crossing the Winding Stair Mountains, found a “shrubby plant allied to Phyllanthus” [Euphorb.] (*Andrachne phyllanthoides* (Nutt.) Muell. Arg.)

154 23My “Nothing could exceed the beauty of these plains, enameled with such an uncommon variety of flowers of vivid tints, possessing all the
brilliancy of tropical productions.” [Nuttall is speaking of the Red River plains in southern Choctaw County, Okla.] Maclura abundant, but male plants a month past flowering. Continued to Horse Prairie.

155 24My From mouth of the Kiamichi River to Horse Prairie. In swampy depressions, “acres of Crinum americanum of the West Indies” (Hymenocallis Liriosme (Raf.) Shinners), besides extensive fields of a large-leaved, glaucous, new species of Rudbeckia (R. maxima Nutt.)

155 26My Prepared to return to Styles’s, but delayed for 2-hours’ collecting after the departure of Major Bradford’s party. [Then lost his way, and stayed from May 26 to June 14 in the Red River plains, with headquarters at Styles’s, collecting all sorts of plants.]

158 1-5Je “Several large tracts of the Red River prairie gilded” with Rudbeckia amplexicaulis Vahl; Coriandrum sp. (Ptilimnium Nuttalli (DC.) Britton); Achillea Millefolium (A. lanulosa Nutt.); Rumex Acetosella (R. hastulatus Baldw.); Centaurea americana Nutt. [which he went 5 or 6 miles to collect on June 6]; and Maclura aurantiaca (M. pomifera (Raf.) Schneider.) Nine genera of grasses are also listed.

162 16Je In a lake about a mile from the Kiamichi River grew: Pontederia cordata L., Nymphaea advena (Nuphar advena (Ait.) Ait.f.), Brassenia peltata (Brassenia Schreberi Gmel.); and Myriophyllum verticillatum (?M. heterophyllum Mx. or M. pinnatum (Walt.) BSP?).

163 17Je In the “cove of the Kiamichi,” above Jack’s Fork, Ixia coelestina (Nemastylis geminiflora Nutt.).

164 21Je Arrived at Fort Smith, on his return.

Appendix II

Some of the species reported in the literature from the 1819 trip from Fort Smith to the Red River Prairies

Nuttall describes the species *Streptanthus maculatus* Nutt. from "amongst rocks and on shelving hills, near the banks of the Kiamichi of Red River in Arkansas Territory."

In his 1834 paper, "A description of some of the rarer or little known plants indigenous to the United States, from the dried specimens in the Herbarium of the Academy" (ibid. 7:61-115) the following are listed from the Kiamichi River and/or the Red River prairie: *Cristatella erosa* Nutt., *Petalostemon decumbens* Nutt. (*Dalea compacta* Spreng.), *Petalostemon multiflorum* Nutt. (*Dalea multiflora* (Nutt.) Shinners), and *Rudbeckia bicolor* Nutt.


The most extended list is from his 1837 paper, "Collections toward a flora of the Territory of Arkansas" (Trans. Amer. Philos. Soc. (n.s.) 5:139-203); and as there are many species, I have put them in tabular form, with page and names as given by Nuttall.

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<td>Veratrum luteum L.</td>
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<td>Euphorbia arenaria Nutt.</td>
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<td>Scilla esculenta Ker-Gawl</td>
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<td>Allium canadense L.</td>
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<td>T. betonicaefolia Nutt.</td>
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<td>A. ochroleucum Nutt.</td>
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<td>Aphora mercurialina Nutt.</td>
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<td>A. angulosum Pursh var. leucorrhizum</td>
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<td>Maschalanthus polygonoides Nutt.</td>
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<td>Crinum americanum L.</td>
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<td>Lepidanthus phyllanthoides Nutt.</td>
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<td>Nemastylis coelestina (Bartr.) Nutt.</td>
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<td>Jatropha stimulosa Mx.</td>
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<td>N. geminiflora Nutt.</td>
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<td>Forestiera acuminata (Mx.) Poir.</td>
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<td>161</td>
<td>Orchis leucophaea Nutt.</td>
<td>177</td>
<td>F. pubescens Nutt.</td>
</tr>
<tr>
<td>162</td>
<td>Aristolochia reticulata Nutt.</td>
<td>179</td>
<td>Collinsia violacea Nutt.</td>
</tr>
<tr>
<td>164</td>
<td>Eriogonum longifolium Nutt.</td>
<td>180</td>
<td>Euchroma purpurea Nutt.</td>
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<tr>
<td>166</td>
<td>Paronychia dichotoma Nutt.</td>
<td>181</td>
<td>Pentstemon tubaeflorum Nutt.</td>
</tr>
<tr>
<td>168</td>
<td>Quercus chinquapin Pursh</td>
<td>182</td>
<td>P. Cobaea Nutt.</td>
</tr>
<tr>
<td>167</td>
<td>Populus monilifera Ait.</td>
<td>183</td>
<td>Dicliptera resupinata Nutt.</td>
</tr>
<tr>
<td>169</td>
<td>Celtis integrifolia Nutt.</td>
<td>184</td>
<td>Glandularia Aubletia (Jacq.) Nutt.</td>
</tr>
<tr>
<td>169</td>
<td>Ulmus crassifolia Nutt.</td>
<td>184</td>
<td>G. bipinnatifida Nutt.</td>
</tr>
<tr>
<td>169</td>
<td>Maclura aurantiaca Nutt.</td>
<td>185</td>
<td>Monarda mollis L.</td>
</tr>
</tbody>
</table>
Torrey & Gray, in their incomplete *Flora of North America* (publ. July, 1838-Feb., 1843) have described perhaps a third of the known plants of the North American flora. I went through the volumes, taking some 300 cards, covering all “Arkansas” collections listed by the authors. The following records for Nuttall (“N”), Pitcher (“P”), Leavenworth (“L”), James, and Engelmann are here given. Nuttall and Leavenworth collected very extensively in the Red River region. Pitcher, in the period 1831-34 collected some on the Red River—we have nine records from him, below, but his post was at Fort Gibson, at the forks of the Arkansas. Engelmann did some collecting in the Fort Gibson region, and James some on the Canadian River (during the summer of 1820) though for a very brief period. The data as given here are thus full, in order that one may also get an idea of how extensively the Red River species were distributed throughout the Arkansas Territory (which, it must be understood, included what is now a large part of the state of Oklahoma.) The plant names are arranged alphabetically, and as Torrey & Gray gave them, without attempt at synonymy:

Abutilon Nuttallii T&G. Red River (N); rocky fields nr. Ft. Towson (L)
Acacia hirta Nutt. Plains of Red River (L); plains of Ark. (N,F), on Canadian River (James)
Agrimonia Eupatoria L. var. mollis T&G.
Red River (P)
Amnicarpae Pitcheri T&G. Red River (P)
Astragalus Nuttallianus DC. Naked places in Red River prairies (L,N)
Atrema americana DC. Prairies of Red River (N,L)
Baptisia sphaeroarpa Nutt. Plains of Arkansas Terr. in wet, gravelly soil, (N), nr. Fort Towson (L)
Brasenia peltata Pursh. Rare! [In pond nr. Kiamichi River, on return to Fort Smith, 16Jel819, N]
Centarea americana Nutt. Red River country (and “western Arkansas”—N,P,L, James)
Claytonia virginica L. Low, moist ground, “Arkansas”
Clematis Pitcheri T&G. Red River (N,F) Coreopsis grandiflora Hogg var. grandiflora; also var. longipes. (N,P,L)
Cosmidium filiformum Nutt. Plains of Arkansas, on Red River, etc. (N,L, Engelmann)
Cristatela erosa Nutt. Sandy hills nr. Red River (N); nr. Fort Towson (L)
Cynosciradium digitatum DC. Arkansas, borders of ponds & wet prairies (N)—fl. May-Je
C. ninnatum DC. Wet prairies, Arkansas (N,P,L); (Coll., N, 20-21My1819)
Cynosciradium Dandelion L. Wet fields, Arkansas (prob. at Red River—no coll. given.)
Dierama prollfera Nutt. Banks of Red River (N,L); fl. Je-Ag
Dierama amplexicaulis (Vahl) Cass. Arkansas (Large fields, 1-5Jel819) on Canadian (James)
Engelmannia pinnatifida T&G. Red River (M); on Canadian (James)
Eustomum Leavenworthii T&G. Red River (L)
Helianthemum polifolium DC. Red River (N), prairies and dry, sterile places (N)

Hymenopappus corymbosus T&G. Red River (N), prairies of Arkansas (L)

Iodionlineae Torr. Red River, Ark. (James)

I. stipulatum (tor stipulatum?) Nutt. Plains of Red River (N); nr. Fort Towson (L); upper Arkansas or Canadian rivers.

Leavenworthia aurea Torr. Torr. Prairie w. of Ft. Towson (L)

Leptocaulis diffusus Nutt. Prairies of Red River (N)

L. echinatus Nutt. Prairies of Red River (N)

L. inermis Nutt. Prairies of Red River (N)

L. leptocephalus Nutt. Plains of Red River (N)

Marshallia caespitosa Nutt. "Woods & moist prairies" (N) [DC. says "on Red River"; and one wonders if others of N's "woods and moist prairies" ought to be credited to the Red River.]

Mentzelia rhombifera Nutt. Plains of Red River (N,L)

Oenothera linifolia Nutt. "Rocks & dry hills, Ark." (N)

Oenothera speciosa Nutt. Red River (N,P)

Osotiloba Nutt. Arid plains, Red River (N,P,L)

Petasites menoncumbens Nutt. Plains of Red River (N)

P. multiflorum Nutt. "Prairies of Ark., particularly on Red River" (N,L)

Praeula digitata Nutt. Sand hills of Red River (N,L), western parts of Arkansas (Beyrich)

P. simplex (Nutt.) T&G. Plains of Red River (N,L)

Rudbeckia bicolor Nutt. Arkansas & Red rivers (N)

R. grandiflora (D. Don) DC. Red River (N,L)

R. maxima Nutt. Plains of Red River (N,L)

Sedum pulchellum Mx., var linifolium Nutt. Arkansas; fl. My-Je—undoubtedly coll. on Red River and/or on the way back to Ft. Smith.

S. sapsilliferum Nutt. Plains of Red River (N,L,P,James)

Stellaria macropteta T&G. (Arkansas, N,P,L—doubtless on Red River in that combination!)

Streptanthus hyacinthoides Hook. Nr. Ft. Towson (L)

V. aduncula Nutt. Banks of Red River (P)

V. repanda Nutt. Plains of Red River (N,L)

Vicia ludoviciana Nutt. Grassy places on Gibson (L); Engelmann (Ft. Gibson)

Waterfall’s Catalogue of the Flora of Oklahoma (Stillwater, 1952) lists 2542 species, of which 2481 are spermatophytes. Of 310 taxa of Leguminosae, 22 species and 4 varieties are Nuttalian; of 369 Compositae, 35 species and 8 varieties bear names conferred by Nuttall. If the other families of spermatophytes had Nuttalian species in the same proportions, there would be about 9.6 percent of Oklahoma plant species with names given by Nuttall.


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“Fort Towson Road.” Chron. of Okla. 5, 414-20. (Narrative of a journey made from Scullville near Fort Smith to Ft. Towson in 1884. From the time when he crossed the Fourche Maline and ascended the Holston and Little Holston rivers to cross Winding-Stair Mountains, he followed closely the trail taken by Major Bradford’s party 65 years before.)
The Texas Species of Dyssodia (Compositae)

Marshall C. Johnston

The genus *Dyssodia* is an American group of tagetineous composites with perhaps forty species in North and Central America and several more in South America. About half are subtropical and half warm-temperate in preference, though at least two reach the cool temperate parts of the continents. The genus is represented in Texas by 14 species, one of these by two varieties.

I aim: (1) to distinguish by key the species of *Dyssodia* in Texas; (2) to map their Texas distribution as indicated by herbarium specimens; and (3) briefly, to indicate and discuss their relationships and nomenclature. Upwards of 2500 herbarium specimens have been examined.1 Many of these were not collected in Texas; this over-all survey threw much taxonomic light on, and indeed was prerequisite to an adequate understanding of, the Texas members of the group.

*Dyssodia* here is used in the probably too wide sense of O. Hoffmann (1890) and subsequent modern workers, in lieu of a much-needed reevaluation of taxa within the Tagetineae.2 The uneven segregation of genera and species by Ryd-