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UTAH BOTANICAL EXPLORER CHARLES CHRISTOPHER PARRY
(28 AUGUST 1823–20 FEBRUARY 1890)

Stanley L. Welsh

ABSTRACT—The Utah botanical contributions of Charles Christopher Parry are discussed. Especial emphasis is on his trips to Utah in 1874 and 1875. Plants taken during those years, which were subsequently listed as type-specimens, are listed. Insight is gained into this window in Utah botanical history through his letters to Dr. George Engelmann and limited correspondence from Engelmann and Joseph Ellis Johnson.

When medical doctor and professional botanist Charles Christopher Parry arrived in St. George on 5 April 1874 (Parry letter BRY), Utah’s Dixie was essentially unexplored botanically. Prior to his trip, this part of the Southwest had been visited by John Charles Fremont in 1844 (Fremont 1845), French naturalist J. Remy in 1855 (Parry 1875a), and Dr. Edward Palmer in 1870 (McVaugh 1956, Parry 1875a), each of whom had collected plants in or near present-day Washington County.

It is not certain that Fremont collected in southern Utah specifically, but it is known that he took plants from immediately south of Utah near present-day Littlefield on 9 May 1844. He traversed the region quickly from the Virgin River to Mountain Meadows, where he remained for one day, resting from his harrowing trip across the Mohave (Fremont 1845). Parry (1875a) notes that in 1855 “a French naturalist, named J. Remy, passed over this route from Salt Lake to Los Angeles, and made a scanty collection of plants on the journey, which were afterwards deposited in the Paris Museum.” In his letter dated 8 October 1874, Parry enquired of Dr. George Engelmann at St. Louis Missouri if he knew anything about the Frenchman J. Remy, “who collected plants on the way from Salt Lake to S. California and Virgen valley sometime in 1854? Specimens deposited in the Paris Mus. Did he publish anything? and what date, &c &c &c??.” The questions anticipated Parry’s (1875) publications in the American Naturalist (Amer. Naturalist 9: 14–21; 139–146; 199–205; 267–273; 346–351).

Doctor Palmer, a friend of Parry’s employed by the Department of Agriculture and the Smithsonian Institution, came to St. George in the spring of 1870 at the suggestion of Parry (Parry 1875a). Palmer collected plants in the St. George vicinity for only about 10 days prior to leaving for St. Thomas, Nevada. During that trip he collected the types of seven Utah plant taxa. In 1877 he returned and collected the types of some 51 additional taxa from Utah, many of them from the southern part (Welsh 1982).

Parry’s sojourn in the St. George vicinity in 1874 resulted in the collection of 37 of a total of 38 type-specimens recognized by various authors as requiring description (Welsh 1982). The solitary type taken during 1875 was that of Festuca dasyclada Hackel ex Beal. He named only three plant taxa from Utah during the period (Welsh 1982), depending on others to name plants of his taking. The plants named by Parry are Oenothera johnsonii Parry, Gilia filiformis Parry ex Gray, and Shepherdia rotundifolia Parry. The latter is based on material collected “on bare clay soil in the upper valley of the Virgen, A. L. Siler, 1873.” The others are based on Parry’s own collections.

The life of Parry has been summarized in several publications, the most important of which are Biographical Sketch of Dr. C. C. Parry (Preston 1897), Charles Christopher Parry (Malone 1962), and Utah Plant Types—Historical Perspective 1840 to 1981—Annotated List and Bibliography (Welsh 1982). Parry was born 28 August 1823 in Adminton, Gloucestershire, England, the son of Joseph and Eliza Parry. His family moved to

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the United States in 1832, settling on a farm in Washington County, New York, when Charles was nine years old. He obtained an A.B. degree in 1842 from Union College and went to graduate school at Columbia College, where he took an M.D. degree in 1846. At Columbia he came under the influence of John Torrey, professor of chemistry, but in reality a pioneer plant taxonomist. Following completion of graduate studies, Parry settled in Davenport, Iowa.

Following 1849, Parry devoted nearly 40 years to botanical exploration of western states and territories, either privately or as a member of some governmental expedition. He was the first person to serve as botanist for the United States Department of Agriculture. Parry was at the Smithsonian Institution from 1869 to 1871, organizing collections from government-sponsored expeditions.

Parry spent much time in Colorado, where he discovered *Picea engelmannii* and named peaks for Asa Gray and John Torrey. California became something of an obsession to him. He visited there more and more in the 1870s and 1880s, where he became interested in chaparral, finally publishing on *Manzanita* and *Ceanothus*. Many new taxa were discovered by him during the course of almost 40 years of collecting. He died at his home in Davenport, Iowa, on 20 February 1890.

Parry’s herbarium and papers are at Iowa State University (ISC): they were sold to the university by his widow in 1895.

Parry was in Utah during portions of 1874, 1875, and 1877 (with Palmer). The main year of exploration was 1874, when he visited St. George and worked out of the home of Joseph Ellis Johnson in Washington. In 1875, Parry worked out of Spring Lake, Utah, where he lived at the home of Benjamin F. Johnson (brother of Joseph Ellis Johnson). Originals of letters written by Parry to George Engelmann, and from George Engelmann and Joseph Ellis Johnson to him, are in the library at Iowa State University. Copies of some of the letters are at the herbarium of Brigham Young University.

Insights into Parry’s days of collection at St. George in 1874 especially are to be found in those letters. They are filled with botanical discussions and other information about the aspirations and expectations of the lives of the participants. While most of the letters are from Parry to George Engelmann, and must have been returned following receipt by Engelmann, additional letters to Asa Gray and other correspondents are hinted at.

The selected letters are too long to be reproduced here in their entirety, and much of the information is not of botanical importance. I have selected for reproduction two complete letters and portions of others that might add insight to the botanical understanding of the period and to the personality of the characters involved. They afford a window into a time no one now living has experienced. The extracts are reproduced as exactly as possible from the handwritten pages, except for underlining of scientific words. Words misspelled are indeed spelled that way in the letters; after all, the letters were not edited and not intended for publication. Within the letters, scientific names were often written without underlining. I have chosen to underline them routinely, so as to avoid the inevitable “sic” quotation. Parry chose to spell Virgin as Virgen. I have not changed his original spelling. Notations in brackets are my editorial notes.

Knowledge of the flora of the region around St. George was strictly limited. The nature of the vegetation was largely a mystery. Botanists in the East were grasping for any material possible to clarify the thin line of specimens, often mere fragments, then available for study. Parry and his correspondents used each other as sounding boards to test the understanding of the taxonomy of the time. They discussed the taxa, offered more complete descriptions, and traded (or sold) specimens. The evolution of taxonomic thought was advanced by their discussions.

Dr. George Engelmann, of St. Louis, Missouri, was interested in many groups of plants, but especially in conifers, cacti, and other succulents (including *Yucca*), and woody plants generally. Parry sent him specimens of these and many more. The Parry correspondence reproduced or quoted here is exclusively to Engelmann, accounting for the many references to the same kinds of plants.

Letters from Parry to Engelmann are addressed to “My Dear Dr.” That dated 14 April 1874, which is reproduced here in its entirety, was sent from St. George (actually Washington, where Johnson’s home was situated) and notes that he:
Reached here 5th just in time to hear Brigham's farewell address to the faithful. Since then I have been tramping over hill and dale, walking and gathering up the many strange things that came in my way. I am in time to catch all early plants. The season being 3 weeks late (for my accommodation). Best news of all Yucca brevifolia, field mail rider, is in full flower 30 miles from here, and [he] will bring it up on excursion next Monday. Imagine my exultation, say tuesday, 21st, I can hardly wait. Not many varieties of cacti just about here. O{pinia} / rutida (probably O. erinacea var. ursina Parish) is here most common. I do not yet meet E. [Echinocereus new Scelolongnia] / johnsonii. There is a large Turks head [Ferocactus acanthodes] near here, that I do not recognize. Am watching it. The Mormons individually call Yucca / bretifolia 'Joshua'. We have here Mesquite & Larrea near the north limits. I do not yet get sight of Agave utahensis. Glad to hear you think Juniperus utahensis distinct from J. occidentalis. I am just now out of the range of Juniperus but will be in it again back & forth & send occasional "instruction" specimens. I do not yet notice a uniform color to the fruit. The riper appear to assume a dull brown, though that may be the result of abortive seeds. I have occasionally seen a tendency to a dull blue with slight bloom. The trunk has a shreds skin. Heart wood is dull red, slightly fragrant. Will get a section, usual size, of full grown trees — 20 ft — in a clumpy shape — branching low down. It is a very common fire wood of the country. Where does it range? I send you today a branch from a woodpile that seems to show male fl. I also saw a fruited Mamillaria. There are hosts of nice things coming on. I am now giving special attention to the evanescent annuals before they take their leave. This is a wonderfully rich fruit district. All temperate & subtropical plants in abundance. I have never seen such a profusion of blossoms. There is danger of late spring frosts, else I do not see what they cannot raise. Grapes [two words illegible] the California. As they say will be 100 degrees F. I see a common wild species [of grape]. So much to try of beginning — send in your ??? books. Yours truly C.C. Parry.

The Parry letter was answered by Engelmann as follows:

St. Louis Apr 24 1874. My Dear Parry: Your different packages have, I think all come to hand, the last were Opuntia rutilla and today a trashy fragment without fl & fr of Junip Utah, but good as illustrating locality — fire-wood?, good!, harder, more compact than our cedar. Well, you will find J. occid. also and examine its wood and bark and perhaps J. pachyphloea, which you know. It comes from Prescott & Fort Whipple — wood, bark, ripe berries. Of course you can not now say anything about the (in the fall) ripe berries. I divide all our Junipers as such with red brown (glaucous bloom) dryish berries of fibrous texture, and such with bluish black (also bloom) juicy or pulpy berries, number of seeds variable in each:
1. Larger brown fibrous berries: 1) osteosperma with Utahensis, 2) pachyphloea
2. Smaller blue pulpy berries: 3) occidentalis, 4) Virginiana, 5) Sabina.

But with Mamillaria, you missed it! Why that is your old friend and early discovery Mamm. phelosperma. First time that I see it fresh. Lord, but — the plant was too fresh and juicy, with the pride and pleasure of spring and [two words illegible]. Mail back [here] squeezed it to death —

try again! Guaranteed there were good seed in those berries.

So you are among Joshua's Army. I hope they don't take you for a Philistine and pierce you with their daggers. But don't forget for heaven's sake, that these plants make suckers, which can be sent, ought to be sent. How would it do to send a whole box full of such young plants here — also of Agave and of Yucca bacatta. Or is this season not favorable, which I doubt, then Johnson might plant there and send in fall or early spring — smaller suckers by mail! Shall I send you a lot of stamps? A sort of inducement to use them well and use them soon.

My Ech. johnsonii did not winter. It was never vigorous. Your Turk's head may be Lecomtei or Eomor. You will recognize easily Agave utahensis by the inflorescences (I saw flower stalks of last year) being spined, flowers in pairs or 4s [7]. You know it does sprout. Dr. McClechamp keeps sending flowering oaks and I hope soon to set matters right and reconstruct / restore some of these condemned scattered species.

Hope you send me flowers of Yucca / brevifolia at once by mail. My article [7] of Yucca is now in printers hands with notes of Yucca / globosa fruit etc. Of course you will look out for fruit of last year — gather as much as you can and find out about the position of the fruit — pendulous or erect.

Gilbert of Lient. Wheelers Exped. has last collected Arceuthobium but I have written to you all about it on Ab. douglasii [Pseudotsuga menziesii (Mirb.) Franko]. Ab. Engelm. & look out! Any oaks in flower?

You ask about the range of Junip. Utahensis — Utah, Arizona, Nevada, and S. California [illegible word]. But the plant is not really distinct from osteosperma (tetragona var. osteosperma Torr.) which grows in California but ranges east to Zuni.

Don't forget to collect that wild grape — male flowers and fruit.

A few bundles of spurs of that large Turk's head would be more acceptable to me [by] U.S. Mail I suppose. I wish you could satisfy me about that fibrous bark of Juniper. It would be a bad sell if I print the damned investigation and then some fellow comes and says it is all closet botany — old universe herbarium specimens — nothing like it is native! Some Mexican Junipers belong to one — another to the other class.

Now my best wishes for Johnson and yourself.

Yours ever G. Engelmann.

Even though Engelmann formalized the name Juniperus californica var. utahensis in 1877 (Trans. Acad. Sci. St. Louis 3: 588), the discussion of Juniperus osteosperma versus J. utahensis would not be settled for many decades (Leaf. W. Bot. 5: 125. 1948). The combination of Torrey's var. osteosperma at specific rank under the genus Sabina by Antoine (Cupress.-Gatt. 51. 1857-60) provided an obstacle to later use of the specific epithet "utahensis," aside from the consideration of an earlier use of the name Juniperus californica var. utahensis by Vasey (Cat. Forest Trees U.S. 37. 1876).

Parry wrote to Engelmann on 21, 24, and 29
May. In his letter to Engelmann dated 3 June 1874, Parry indicated receipt of information that Engelmann had received “Joshua tree,” and sent a sketch of flowers of Yucca brevifolia and actual flowers of Y. angustifolia [probably Y. utahensis], with a bug “which may do the fertilizing though I have not seen it in the act.”

Parry goes on to state that he had selected some yucca plants near his lodgings with the Joseph Ellis Johnson family for observation. “The plants were ruthlessly broken down by boys or crows?” Parry then looks forward to the possibility of joining Engelmann in Colorado.

In spite of the close of the spring-flowering season, Parry was still in St. George on 19 June. He chastises Engelmann for his interest in oaks. He opens his letter to Engelmann on that date with the following:

If I had you within reaching distance I should be strongly tempted to use an instructive cudgel of Quercus emoryi [Q. turbinella Greene] — to keep bothering me with the nasty things! As if it was not enough to lose the seat of my pants in scrambling over them to find old fruit & new flowers!!! Well the disaster above referred to is measureably repaired & now I am in better humor. I recognize here only two oaks (evergreen) Q. emoryi, very variable, & deciduous leaved Q. douglasii? [Q. gambeli Nutt.].

Parry also indicated that he had taken Vitis arizonica, including male and female flowers and young fruit, for shipment to Engelmann. Also, Engelmann seems to have been interested in having more complete material of Lewisia brachyelyx Engelm. ex Gray, which had been published earlier (Proc. Amer. Acad. 7: 400. 1868). Parry writes:

I enclose in this [letter] a scrap of Lewisia brachyelyx Engelm., of which I have ample material to [amend] the characters. Petals in billy opened specimens have the length of the sepals, 1 [line] broad, whitish satin color with pink streaks. The plant is not very showy. The individual (- post fl.) buds being massed in the center of a circle of spathulate oblong leaves on the ground. Grows in boggy spring places. Pine Valley. 8000 ft.

Parry further states: “About Cacti, our common arborescent species is O. echinocarpa Engelm. & Big., a horrid thing with ginvish yellow fls.” And, further:

I have had some conversation with [Joseph Ellis] Johnson in reference to collecting plants & seeds for sale. He is anxious to do something in that way. He is pretty much broken down himself but has an active promising boy Charles who I hope will do some good work. I have given him some training and he is apt. They will make it a business to collect “Joshua.” Agave. Cacti, to ship this fall. Johnson is very hard up & poor? (too much polygamy). It would be quite an encouragement if you could advance him $20. He is perfectly reliable and will send everything to you to be disposed of to the best advantage so you will run little risk.

On 23 June 1874, Parry sent his “last flash” to St. George. He stated: “I am now packed & ready to leave in the morning for Cedar City or as you would have it Juniperus osteosperma var. Utahensis [city].” Parry includes a statement to Engelmann clarifying the location of “Beaver Dam.” “It is the next SW tributary to the Virgen, was a frontier Mormon settlement till surveys showed it to be within the boundaries of Nevada [actually Arizona] and was then abandoned, also St. Thomas further south on the Muddy. I suppose Powell’s maps will give latest geographical data, or Wheeler’s. The Beaver Dam Mts. are the high range between here [St. George] and Beaver Dam Creek. I do not know their elevation.”

A single letter dated 9 July 1874 from Parry to Engelmann is extant from Cedar City. Following a preliminary discussion on future plans to go to Davenport and return to Colorado with Mrs. Parry to meet the Engelmanns, Parry launches into his first love:

Now a word on botany. I sent you in paper a sprig of J. utahensis (July 4th). The fruit seems well formed but hardly mature enough for seed. I shall arrange here to have seed collected & sent on later. Did the berries reach you in their natural color — light green with glaucous bloom? I judge from specimens that they soon turn purple to brown. I send with this fr. & leaf of Yucca angustifolia var. latifolia as it grows here. fr. disturbed by the worms. Op. rutilla Nutt. looks different from St. George, fewer (coarse) spines & thin growth. Charlie Johnson will fill you out with Op. echinocarpa Engelm., seed & fr. Ask him for the common tree species and tell him what you want. Send postage stamps (not too large 6 & 14 cts). There will be a difficulty in getting ripe cones of A/bies/ concolor. It must be watched closely & gathered within a week or less.

Parry notes that the Johnsons can “manage Y. brevifolia seed by the bushel if desired.” Engelmann is told to "write encouraging to Johnson, but do not send money at first. Let him say what he will do."

Almost as an aside Parry indicates: “I met here by accident A. L. Siler, an odd specimen. He is collecting seeds and plants. I have advised him to send pines & oaks to you. He is living in a very choice mountain district east of here, is poor, shiftless, & lazy (fide Johnson), will need postage stamps. He gave me some seeds. I enclose a few of a remarkable Eleagnaceae.”
Andrew Lafayette Siler, a Mormon rancher, lived at a place called “Ranch,” reputedly near Kanab, but actually near the head of the Sevier River, between present-day Long Valley Junction and Hatch near the Kane-Garfield county line. Siler collected plants in Kane and adjacent Mohave (Arizona) counties. He was interested in cacti and took a collection of a low depressed-hemispheric ball-cactus, which was named by Engelmann as Echinocactus sileri (later Utahia sileri [Engelm.]) Britton & Rose; now Pediocactus sileri [Engelm.] L. Benson. The cactus was later found in Utah. His most important find appears to be Shepherdia rotundifolia Parry, Jones (Contr. W. Bot. 16: 46–47. 1930) says of Siler: "He was about seven feet tall and thin as a rail, and wore about a No. 14 shoe. He was awkward and uncomely, but a real man."

Following his contact with Parry in Cedar City, Siler corresponded with both Engelmann and Parry. He collected seeds of various plants for sale to Engelmann and others. Parry notes the collection of 50 pounds of Abies concolor seed for sale by Siler, and in another place he wrote that Siler expected to make a thousand dollars that year selling seeds and specimens. Both Parry and Engelmann scoffed at the idea; they sent him stamps and occasional payments of a dollar.

The reference to the seeds of the “remarkable Elaeagnaceae” were to be the subject of discussion in several of Parry’s letters to Engelmann during the last months of 1874 and much of 1875. They turned out to represent Shepherdia rotundifolia Parry.

Parry found himself somewhat of a celebrity upon his return to Davenport. He had, after all, returned from among the Mormons, with their peculiar polygamous life-style. Parry’s letter of 23 February 1875 to Dr. Engelmann notes: “I am through with my lecture 'Utah & the Mormons.' So I can’t sympathize with you. It netted our Acad. Sciences $2.50???” Evidently, preparation for his Mormon lecture had led him to enquire of the events surrounding the Mountain Meadows Massacre, which had taken place in 1857 some 25 miles due north-northwest of St. George. His source of information was Joseph Ellis Johnson, who wrote to him on 30 January 1875. Johnson opens the letter with greetings and then recounts family and neighborhood happenings. The temple was under construction and “up to middle of the first story.” Johnson had his “wine and curing house up and closed in.” Finally, having put off the question for as long as possible, he states:

Well I have written everything I can think of and will now change subject to the subject of your lecture. The M. M. M. [Mountain Meadows Massacre] occurred in that exciting period when Johnson’s army was striving to enter S L. Valley, the people off here 350 miles south from settlements on the road — no mail facilities — nervously guarding and watching for a part of the army to come, Via New Mexico, Colorado or California — All uncertainty & excitement — Indians highly excited against 'Americats' (white emigrants) who from the time of Fremont's visit, who shot 8 indians near here, and generally after they (Emigrants) have shot Indians at sight — Then the company from Ark. [Arkansas] while at Corn Creek lost an ox & the Indians Eat of it & S died immediately — These Indians followed and raised all others on the route — and no doubt under the excitement some of our vengeful ones might have joined — we don’t know, but so I believe and the deed was done — The Indian Chief at parowan was advised by the Bishop not to go — he stayed[,] but was brought two yoke of oxen by his men.

Johnson then defended the Mormon church and its officials, stating that it was the policy at the time to “crisp the enemy in means but not in men. . . . They sent an express to B. Y. [Brigham Young], asking shall we protect them or fight them? The answer came by swift messenger 2 days too late — 'protect & pass them safely through the country' from B. Young."

It would be interesting to know how the information was used in the Parry lecture on the Mormons, whose polygamous life-style impressed him negatively.

There are two letters from Parry to Engelmann from Spring Lake, Utah, in the summer of 1875. The first is dated 8 July 1875. In it Parry discusses Abies concolor, other plant species, and the nature of Utah Lake. Of the latter, Parry says, “I have been over on a trip to the head of Lake Utah, a nice sheet of water but poor in botany.” He had anticipated going to St. George in the autumn but decided to go to California instead. He discusses some of the forest trees of Utah and gives their common names as follows: “Abies concolor is called here ‘Black balsam’ and is cut for R R ties, considered good timber. A. grandis [probably A. lasiocarpa] is ‘White balsam’ and considered worthless. ‘Red pine’ is A. douglasii & ‘White pine’ A. Engelmanni.”

A portion of the 1875 season was spent in a mountain cabin remote from Spring Lake, but
there is no reference to where collections were actually made, except for Mt. Nebo and vicinity.

In the letter dated 28 August 1875, Parry notes: "I expect Mrs. Parry next week, will go to meet her at Salt Lake, bring her down here to introduce her to the polygamists &c & leave for California about 20th Sept."

Thus, Parry closes out his second trip to Utah.

List of C. C. Parry Type-Specimens


Washington Co., Utah, near St. George, Parry 207 (US; NY).

Papaveraceae.

Parry (1875b) says, in reference to this plant:

 Amid the more unusual forms of undergrowth, made familiar in my rambles near St. George, my attention was drawn at a single locality to a showy Papaveraceous plant, with nodding white flowers, in which I was delighted to recognize the *Arctomecon Californicum* Torr. (No. 6), collected only by Fremont thirty years ago, and figured and described in his report from a single specimen. The present collection, since supplemented by mature fruiting specimens, furnishes the means of completing the description of this interesting plant, which seems to differ from the original figure in its less hairy leaves, four (not six) valved capsule and more caespitosus habit. The fruiting specimens show marcescent petals, persisting after the maturity of the seed, and an erosion of the upper third of the triangular valves, leaving the placental ribs connected at the summit with the united stigmas forming a basket in which the shining black seeds lie loosely like so many eggs. The plant is apparently biennial, with deep tap roots, the broken stem and leaves giving out a yellowish sap. In the two localities where found it grew in a loose marly soil, strongly impregnated with Gypsum.

The protologue of *Arctomecon* and its only species, *A. californicum*, in the appendix of the second Fremont expedition included the descriptions of the petals "about an inch long, yellow" (Fremont 1845). The discrepancy seems to have been lost on Parry, but with only the description by Torrey for comparison, it is not easy to now fault Parry.

The species was not published until two years following Parry's death.

*Aselepias leucophylla* Engel. in Parry, Amer. Naturalist 9: 348. 1875.


In Parry's letter to George Engelmann dated 23 February 1875 is a comment on his specimen No. 207. Parry says: "But there is something in your line. I am not quite clear about No. 207, which Gray says is near *Asclepias erioarpa* Benth. I doubt this, as the habitat and location is quite familiar, grows 4–6 feet. What do you say?" The answer is not present among the correspondence examined, but obviously Engelmann agreed that specimen No. 207 was not *Asclepias erioarpa*. In another letter to Engelmann, dated 27 March 1875, Parry says: "I have nothing to help out *Asclepias erioarpa*. No. 207, grows in dry sandy washes of the Virgen, 3–5 feet, curious mottled leaves. I do not think it is either of the California sp." On 29 April 1875, in another letter to Engelmann, Parry further states: "I have seen *Asclepias* here [he was writing from Brooklyn, New York, and had visited the Torrey herbarium] & at Philadelphia, including several specimens of A. *erioarpa* and A. *vestita*, confirming your diagnosis of A. *leucophylla*, but yesterday at Torrey Herb I saw an unmarked specimen from Vera Cruz (Hatssted), the exact counterpart of ours? I send some flowers to compare, not having any specimen of A. *leucophylla* here. If it agrees, is not the taller likely to prove a descended Mex[i]can sp.?'"


Washington Co., Utah, Beaver Dam Mountains, C. C. Parry 45, 5 May 1874 (MINN; US!). Leguminosae.

Parry (1875b) notes that No. 45 (identified as *Astragalus arrectus*) was taken "at our noonig place [Beaver Dam Mts.], having reached an elevation of not less than one thousand feet above the valley of the Virgen, a deep gorge in the limestone rocks afforded a scant supply of water." *Astragalus cremiticus*, the hermit milk-vetch, remained unnamed until four years following Parry's death.

The opportunity to travel to the Beaver Dam Mountains is reported by Parry (1875b). He describes the route as crossing the Santa Clara near its mouth (confluence with the Virgin) and proceeding up one of the "dry washes" leading more directly toward the mountain slope. The site of the "nooning" is not known, but could be the head of Cedar Pocket Wash, which is crossed by the historic road between St. George and Las Vegas. Other plants cited by Parry as being collected with *Astragalus arrectus* are *Oenothera*

Southern [probably Washington Co.] Utah, Parry 164, 1874 (NY).

Boraginaceae = Cryptantha micrantha (Torr.) Johnst.

The collection was properly identified at the time (Parry 1875d) as Eritrichium micranthum Torr., the basionym of Cryptantha micrantha.


Washington Co., Utah, rocky slopes near St. George, May 1874 (US!, NY!).

Polygonaceae = E. brachypodium T. & G.


Sevier (?), "Lower valley of the Sevier," Parry 245, July 1874 (G11).

Polygonaceae

This was likely taken on his return trip from Beaver to Salt Lake City.


Washington Co., Virgin River valley, Parry 237, 1874 (USC!).

Polygonaceae


Washington Co., St. George, Parry 171, 1874 (NY?).

Boraginaceae = Cryptantha barbigera (Gray) Greene


Southern [probably Washington Co.] Utah, Parry 1874 (NY?).

Boraginaceae = Cryptantha pterocarya var. pterocarya

Parry (1875e) cites two collections of Eritrichium pterocarpyon Torr., numbers 168 and 169.


Euphorbiaceae

Festuca dasyrythropa Hack. ex Beal, Grasses N. Amer. 2: 602. 1896.

Utah, Parry 93. 1875 (US!, ISC!, NY!).

Gramineae

This curious grass was taken by Parry in 1875 while he was a resident at the home of Benjamin F. Johnson. Parry was concentrating on collecting conifers for shipment to Dr. Engelmann. He made forays to Mt. Nebo, and possibly penetrated as far as the Strawberry Ridge or to the Wasatch Plateau. The
species in Utah is currently known from the margin of Strawberry Ridge near the Utah-Wasatch county line, the Wasatch Plateau, and the Table Cliff Plateau. This grass, named some six years following Parry’s death, remained obscure for a long time, partially because of its remote habitats, but primarily because of its resemblance to *Stipa hysmenoides*, which it simulates in growth form and habit of branching of the inflorescence. The *Stipa* is a common species through much of Utah and coexists with *Festuca dasyclada* on high-elevation Tertiary limestones and calcareous shales. Each plant must be examined with care to note the differences. This *Festuca* is also known from Tertiary shales in Rio Blanco and Garfield counties, Colorado.

Iron Co., “gypseous clay hills near Cedar City,” C. C. Parry 120, July 1874 (NY!).

*Compositae* = *G. parryi* Greene, not Pursh

The name *Gaillardia acaulis* Gray is a later homonym of *G. acaulis* Pursh, the basionym of *Hymenoxys acaulis* (Pursh) Parker, hence *G. parryi* Greene.


*Polemoniaceae*

Gray (1875a) cites the type locality as “Southern Utah, on the detritus of volcanic rocks, Dr. Parry.”

*Gilia latifolia* Wats. in Parry, Amer. Naturalist 9: 347. 1875.

*Polemoniaceae*

This plant is almost at the margin of its range at the type locality. The species extends into Utah in two areas: along the Virgin River into Washington County, and along the canyons of the Colorado into Kane, St. Juan, and Wayne counties. Otherwise its distribution is through southern Nevada, northern Arizona, and southern California. *Gilia latifolia* is especially well adapted to growth on gravelly alluvial fans warmed early by spring sunshine and watered late by summer and winter rains.

left St. George on 8 May 1874 on an excursion to the Beaver Dam Mountains, and, "On reaching a higher elevation on a continuous upward grade there was brought to view a greater profusion of plants and shrubbery, conspicuous among which may be noted Adenobryum cuneata [probably Salvia dorrii] Coleogyne ramosissima, and a caespitose yellow-flowered Mammillaria (M. chlorantha Engelm. ined.)." Various authors have cited the type locality as "Southern Utah, east of St. George." The pale-flowered plants are currently known only from the Beaver Dam Mountains.

"Mam. chlorantha is forming seed but not yet in proper condition. I send in this parcel what I like to be M. arizonica, apparently distinct enough" (Parry letter of 23 June 1874 from St. George).

Specimens of an unnumbered Mammillaria are in the Parry herbarium at ISC (duplicate BRY). They were annotated as Coryphantha vivipara var. arizonica (Engelm.) W. T. Marshall by Lyman Benson in 1967. Possibly these are the basis of the reference to M. arizonica.


The citation for No. 147 in Parry's (1875e) list is as follows: "Eutnanus ——? A slender, large flowered showy annual, growing abundantly on gravelly hills near St. George; flowers mostly bright yellow. A light pink variety (?) was also met with later in the season."


*Oenothera albicans* var. decumbens Wats. ex Parry, Amer. Naturalist 9: 270. 1875. Washington Co., Utah, "common in dry, sandy soil, near St. George," C. C. Parry 63, 1874 (GH?). Onagraceae — *Oe. deltoides* sp. ambigua (Wats.) W. Klein

*Oenothera brevipetala* var. parviflora Wats. in Parry, Amer. Naturalist 9: 271. 1875. Washington Co., Utah, near St. George, C. C. Parry 74, 1874 (GH; MO; F). Onagraceae — *Campionia multiflora* (Wats.) Raven

*Oenothera johnsonii* Parry, Amer. Naturalist 9: 270. 1875. Washington Co., Utah, near St. George, C. C. Parry 64, 1874 (ISC!).

Onagraceae — *Oe. primiveris* Gray

Parry (1875d) notes: "Common on all dry hills near St. George. Dedicated to J. E. Johnson, Esq."


Onagraceae — *Campionia parryi* (Wats.) Raven

"Abundant in bare gypseous clay hills near St. George; fl. May" (Parry 1875d).


Parry (1874b) discusses this species as follows:

Among the rarities of this section must be noted a well-marked new species of the peculiar southwestern genus *Petersonia*, characterized by Prof. Gray as *P. Parryi* n. sp. (No. 75), this making a second recent addition to the genus. Of this only a single plant was met with, forming a low bush with remains of dead stalks, especially conspicuous at a distance from the faded leaves of the previous season's growth, exhibiting a pure pearly white. The delicate cream-colored blossoms, with exerted style and stamens, reminded one of *Loniceria*, but the polytelons flowers and the peculiar hairy brittle leaves designated it as one belonging to the Loasaceae. A diligent search over the dry gravelly and alkaline soil, where it was found associated with the common 'grease woods' of this region, failed to bring to light any other plants, so that this single locality, precariously situated within a stone's throw of the great Mormon temple, does not encourage the hope of a prolonged existence for the benefit of future botanists.

The plant from which the type material was taken has long since been eradicated. The species is, however, locally common on the Moenkopi Formation east of Washington, Utah.


According to Parry (1875e), this species occurred "on bare clay soil in the valley of the Virgin." The label information on Parry 179 at BRY is "rock crevices, near St. George."
Washington Co., Utah, near St. George, C. C. Parry 182, May 1874 (GH; POM; NY; US; BRY).
Hydrophyllaceae

"Abundant on gypseous clay hills near St. George" (Parry 1875e). The species is referred to in the text (Parry 1875a) as P. crassifolia Torr. Of the species, he (l.c.) notes: "Hardly less showy [than P. fremontii Torr.] is the Phacelia crassifolia Torr. (No. 182), with flowers of an intense blue shade, thickly scattered over gypseous clay knolls. This latter species frequently becomes dwarfed in exposed places, and spreads out in the form of purple patches over the bare soil."

Platystemon remotus Greene, Pittonia 5: 190. 1903.
Papaveraceae = P. californicus Benth.

This is correctly identified in Parry's (1875d) list.

Platystemon rigidulus Greene, Pittonia 5: 167. 1903.
Washington Co., Utah, near St. George, C. C. Parry 8a, 1874 (CAS).
Papaveraceae = P. californicus Benth.

Iron Co., Utah, near Cedar City, C. C. Parry 109. 1874 (US!; ISC!; BRY!).
Compositae

Parry (1874c) notes: "Along the gravelly margins of Cedar Creek was found ... Thelesperma subnudum Gray, n. sp." Gray (l.c.) cites the type locality as "St. George, Southern Utah, Dr. Parry." That error, having been copied from Gray, is perpetuated in Welsh (1982).

Iron Co., Utah, near Cedar City, C. C. Parry 35. 1874 (NY!; BRY!)
Leguminosae = T. longipes var. brachypus Wats.

This plant, called Trifolium eriocephalum Gray by Parry (1875d), is indicated as having been collected on the "Sheep range, Cedar City. July." Parry (l.c.) notes: "Having soon exhausted this scanty flora [near Cedar City], my attention was directed to the high mountain range of the Wahsatch, rising abruptly to the East, and overlooking the southern extension of the great interior basin. An ascent of about 3,000 feet in a distance of three miles, brings us to the outer crest of the range, which extends eastward in an irregular series of undulations to the upper Sevier valley." He further states: "Four miles back towards the interior of the range, the country expands into wide grassy slopes, and frequent springs and running streams bordered by snow drops, give unwonted freshness to the pastoral scenery. Here is located the summer sheep range, and dairy farms of this district, of which the only apparent drawback to their attractive and productive features, is the annoying prevalence of blood-thirsty flies."

The flies are still there during the summer months.

Literature Cited