

DR. EDWARD PALMER'S COLLECTING LOCALITIES IN  
SOUTHERN UTAH AND NORTHWESTERN ARIZONAF. MARTIN BROWN<sup>1</sup>

Fountain Valley School, Colorado Springs, Colo.

Dr. Edward Palmer was an extraordinary man. From a biography written by Rogers McVaugh (1956) I have culled much of my information. He was born in England on January 12, probably in the year 1831, near Wilton in Norfolk. At various times he gave the date of his birth as 1831, 1832, 1833, 1837! He arrived in the United States in 1849. He started his career as a botanical collector in 1852 when he joined the Page Expedition to Paraguay. He studied medicine for a few months in the winter of 1856-57 at the Cleveland Homeopathic College before moving to Highland, Kansas, where he set up to practice that art. In 1860, he was in Denver, Colorado, where he lived for two years, collected plants, and possibly practiced medicine. When the Civil War broke out he joined the 2nd Colorado Regiment and served as its surgeon. He served in this capacity in the Army at various posts in the Southwest. In 1865, he was posted to Fort Whipple in Arizona where he was met by Dr. Elliot Coues, a fellow naturalist. While at these posts Palmer spent all of his free time collecting plants and birds for the Smithsonian and for private collectors. As early as 1865 he also collected insects. His wide interests soon broadened to include archeological collecting and a general study of ethnobotany. He left the Army in 1868 (?) and became a professional field naturalist, often employed by the Department of Agriculture exploring for plants in the Southwest and in Mexico.

## 1870

In 1870 Palmer left Washington, D.C. in the middle of May and traveled to Salt Lake City by rail. There he engaged passage in a coach and in a week was in St. George, Utah where he spent about ten days. He left St. George on June 17th for St. Thomas, Nevada, now under the waters of an arm of Lake Mead. He ultimately reached the mouth of the Colorado River. For the purpose of this paper we are interested in his stay in Utah and travel as far as St. Thomas.

The types of *Apodemia palmerii* (Edwards) were collected on this trip.

## PALMER'S TIMETABLE, 1870

May 31—left Salt Lake City by stage coach for St. George, following essentially the present route of U. S. Highway 91.

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<sup>1</sup> This study was supported by N.S.F. Grant GB-2741.

- June 1-3—Fillmore, Millard Co. These dates are from botanical specimens. It seems unlikely that the stage made the trip from Salt Lake City to Fillmore in a single day. The distance is about 130 miles. I suspect that Palmer arrived late in the day on the 1st and spent the 2nd and 3rd at and about Fillmore.
- June 4—Spent the night at Beaver City, presently Beaver, Beaver Co.
- June 5—Spent the night at Cedarville, presently Cedar City, Iron Co.
- June 7—Arrived at St. George, Washington Co.
- June 17—Left St. George, Washington Co.
- June 18—Camped in Beaver Dam Mountains west of St. George traveling with a threshing machine being hauled to St. Thomas, Nevada.
- June 19—Camp late on the Virgin River "where Beaver Springs empties into it". This is near the present town of Littlefield, Mohave Co., Arizona.
- June 20—Arrived at St. Thomas, Clark Co., Nevada, now submerged in Lake Mead, after "I had walked nearly all the time which gave me a chance to collect."

## 1875-1876

Palmer arrived in St. George, Utah, from San Diego, California, in the middle of October. In St. George he lived with Joseph Ellis Johnson and his family. While he and the children of the family collected some plants and insects, Palmer spent most of his and their time excavating Indian ruins for the National Museum. He left St. George early in 1876 and collected plants in the desert country of Arizona and southern California.

## 1877

It was on his 1877 trip into southern Utah and adjacent northwestern Arizona that Palmer collected insects in earnest. He had been engaged by the Peabody Museum of Harvard University to excavate further the Indian ruins in the vicinity of St. George, Utah. S. H. Scudder prevailed upon Palmer to make extensive insect collections at the same time. The following itinerary for Palmer during 1877 is based upon data from McVaugh (1956) and from Scudder (1878).

Palmer arrived in St. George, Washington County, Utah, around the 23rd of December 1876. He had been working in the arid southwest for several years collecting plants and anthropological material. It is unfortunate that none of his field notes have as yet been found for the years involved. He used St. George as a base for operation the early half of 1877, until 22 June. During the spring months he roamed as far south as Mt. Trumbull in northwestern Arizona and west to St. Thomas in Nevada, north to Mountain Meadows in Utah and east to Kanab.

His next base appears to have been Paragonah, Iron County, Utah, where he arrived on the 25th of June after a two or three-day wagon trek northeast from St. George. He stayed in this general area until the 10th of July, collecting plants and insects in the vicinity and especially in the mountains. On the 12th of the month he arrived at Beaver, Beaver

County, where he made his base while collecting there in the mountains. He left Beaver on the 21st and by means of a four-day wagon trip reached Spring Lake, just south of Utah Lake in Utah County on the 25th. There he collected archeological material and insects until about the 11th of August. From Spring Lake he struck northward to Salt Lake City where he stayed from the 13th to the end of the month. From there he left Utah and traveled to Davenport, Iowa.

#### PALMER'S TIMETABLE, 1877

- December 28, 1876—arrived at St. George, Washington Co. and based until June 22, 1877;  
 March 1-27—to Johnson (March 12) and Kanab, Kane Co. (March 14), and return;  
 April 12-25—Beaver Dam [Littlefield] Mohave Co., Ariz. and St. Thomas, Clarke Co., Nev. and return;  
 April 27-30—to Mokiah Pass, Mohave Co., Ariz., 20 mi. east and south of St. George;  
 May 1-2—to Juniper Mountains [Cedar Ridges], Mohave Co., Ariz., and returned to St. George on the 4th;  
 May 12—at Pine Mountain, Washington Co., 20 miles north of St. George enroute to Mountain Meadows;  
 May 14-22—Mountain Meadows, Washington Co., about 7 mi. east of Enterprise, (on the 19th in Diamond Valley) and returned,  
 June 1-4—returned for a second time to Mokiah Pass and Juniper Mountain,  
 June 7-10—Mount Trumbull and returned to St. George on the 15th.  
 June 22—departed from St. George by wagon;  
 June 25-26—Paragonah, Iron Co., where he based until July 10th,  
 July 3-10—at Parowan, Iron Co., 4 miles southwest of Paragonah,  
 July 4—at “Beaver” [Bear] Valley near “Red Creek” [Paragonah]  
 July 12—at Copeland's Mill “16 miles SE Beaver City, head of Beaver Cr & near the base of the loftiest peak of the mountains called Balldey Warsatch [sic!] range.” en route to Beaver;  
 July 12—Beaver, Beaver Co., where he based to the 21st;  
 July 12-18—in the Wasatch Mountains near Beaver;  
 July 17—at North Creek on the north side of Mt. Baldy;  
 July 18-20—in the mountains east of Beaver, “Beaver Mountains”;  
 July 21—left Beaver by wagon on a four day trip;  
 July 25—“Spring Lake Ville” [Spring Lake], Utah Co.,  
 August 11—left Spring Lake for Salt Lake City. He stayed in the vicinity of Salt Lake City until the end of August.  
 August 15—visited “Touilla” [Tooele, Tooele Co.], to examine some Indian mounds and apparently did no collecting.

At the outset of his article Scudder (1878: 253) states specifically that he received only forty-one species in the collection from Palmer. These he listed and commented upon and they included four new species: *Neominois dionysus*, *Anthocharis thoosa*, and *Pholisora libya* described by Scudder in the article and an un-named species of *Erynnis*. Because Scudder's article is little known I recapitulate its information in tabular form.

Almost all of the area visited by Palmer is accessible today by ordinary

TABLE I.—LIST OF BUTTERFLY SPECIES TAKEN BY PALMER IN UTAH AND ARIZONA DURING 1877 AND RECORDED BY SCUDDER (1878).<sup>1</sup> Localities: St. G. = St. George, April–May; Beav. Dam = “Beaver Dam” (Littlefield), April 20–28; Mok. Pass = Mokiah Pass, April 28–30, June 2; Jun. Mts. = Juniper Mountains, May 1–2, June 4; Pine Mt. = Pine Mountain, May 12; Mt. Mdw. = Mountain Meadow, May 14–18; Mt. Trum. = Mt. Trumbull, June 7–10; Bear Vy. = Bear Valley, July 4; Parag. = Paragonah, July 10–11; Beav. Mts. = “Beaver Mountains,” July 18–20.

	St. G.	“Beav. Dam”	Mok. Pass	Jun. Mts.	Pine Mt.	Mt. Mdw.	Mt. Trum.	Bear Vy.	Parag.	Beav. Mts.	
SATYRIDAE											
<i>N. dionysus</i> Scud.				vi			*				types
<i>C. ochracea</i> Edw.								*	*		
DANAIDAE											
<i>D. berenice</i> Cram.	*										
NYMPHALIDAE											
<i>L. weidemeyerii</i> Edw.								*		*	
<i>N. antiopa</i> Linn.	*		iv								
<i>V. cardui</i> Linn.									*		
<i>S.</i> “nevadensis”											*
<i>S.</i> “rupestris”											*
<i>S.</i> “coronis”											*
<i>E.</i> “editha”			*		*				*	*	
<i>C.</i> “helcita Bdv”			*		*						possibly <i>acastus</i> Edw.
<i>M. arachne</i> Edw.								*			
<i>P.</i> “campestris”					*			*	*		possibly <i>camillus</i> Edw.
LYCAENIDAE											
<i>I.</i> “irioides”								*			
<i>S. melinus</i> Hbn.	*										
<i>M. siva</i> Edw.				*					*		
<i>E. amyntula</i> Bdv.											
<i>P.</i> “pheres”							*	*			*
<i>P. saepiolus</i> Bdv.								*			ssp. <i>gertschi</i> dP
<i>L. heteronea</i> Bdv.											*
<i>P.</i> “battoides”				*							
<i>P. melissa</i> Edw.								*		*	
<i>B. exilis</i> Bdv.	*	*		v							
<i>L. sirius</i> Edw.											*
<i>L. helloides</i> Bdv.				*				*	*		
PIERIDAE											
<i>C. eurytheme</i> Bdv.	*			*							*
<i>N. iole</i> Bdv.				*				*			*
<i>A. thoosa</i> Scud.			*								types
<i>P.</i> “oleracea”											*
<i>P. protodice</i> Bdv.	*			*				*	*		
PAPILIONIDAE											
<i>P. daunus</i> Bdv.				*							
HESPERIDAE											
<i>E. tityrus</i> Fab.								*			
<i>T. pylades</i> Scud.								*		*	

<sup>1</sup> Names given in quotation marks are incorrectly used by Scudder and not verified or correctable at this time; those in *italics* are acceptable. Abbreviations of current generic assignments are indicated. Scudder's varietal names are here repeated without the species assignments indicated by Scudder.

TABLE I.—Continued.

	St. "Beav. Mok. Jun. Pine Mt. Mt. Bear	Beav.
	G. Dam" Pass Mts. Mt. Mdw. Trum. Vy. Parag. Mts.	Mts.
<i>E. "proportius"</i>	iv v	* prob. <i>tele-</i> <i>machus</i> Burns not described by Scudder
<i>E. "n. sp."</i>		*
<i>A. comus</i> Edw.	vi	
<i>P. communis</i> Gr.	*	* * *
<i>H. ericetorum</i> Bdv.	*	*
<i>P. catullus</i> Fab.		*
<i>P. libya</i> Scud.	*	types
<i>O. sonora</i> Scud.		*

automobile. The following gazetteer of Palmer's insect localities pinpoints them so that they may be recovered. A good roadmap, supplemented by the "NJ-12" sheets of the U.S.G.S. 1 : 250,000 series,<sup>1</sup> will be ample for the task.

Bear Valley, Iron Co., Utah: ca. 7800', T33S, R7W, ca. 37°55'N, 112°38'W. Scudder (1878: 253) described Bear Valley as "about 20 miles nearly south of Beaver, surrounded by spurs of the Wahsatch (sic!) Mountains." McVaugh (1956: 147) states: "The Gray Herbarium list of Palmer's collection of 1877 shows that he made about 40 collections of plants at "Beaver Valley near Red Creek, Utah." "Beaver" is probably an error for "Bear," since Bear Valley lies just northeast of Red Creek, off the west slope of Bear Valley Peak." Scudder's date for the insects from Bear Valley, July 4, falls within the span of time during which Palmer collected out of Paragonah. Bear Valley is about 35 miles south of Beaver and is "surrounded by spurs of the Wahsatch (sic!) Mountains." The specimens collected suggest a valley with meadows and a permanent stream. NJ-12-7.

Beaver, Beaver Co., Utah: 5900', T29S, R7W, 38°17'N, 112°39'W. Beaver is on U. S. Highway 91 in a more or less circular open valley about 10 miles in diameter surrounded by wooded mountains. To the east is the Tushar Range, to the south the uplands connecting them with the Black Mountains, to the west the Mineral Range and the north the uplands connecting the Mineral and Tushar ranges. Palmer's plants from this area are labeled from the "Warsatch" Mountains and the "Beaver Mts." His insect collections suggest mountain meadows at about 8000 feet elevation. His "North Creek" probably is the South Fork of North Creek, heading in Blue Lake north of Shelly Baldy Peak, a spur of Delano Peak (12,173') and east of Mount Baldy (12,080'). Copeland's Mill probably was somewhere up Beaver Creek on one of its many branches that drain the south and southwest flanks of the Delano massif. NJ-12-4.

"Beaver Dam on the Virgin River" See Littlefield, Arizona.

"Beaver Mountains" See Beaver.

"Beaver Valley" See Bear Valley.

"Copeland's Mill" See Beaver.

"Juniper Mountains," Mohave Co., Arizona: "It is about 20 miles east of south of Mokiah Pass (Scudder, 1878: 254) . . . covered with juniper trees and scrub pines (Scudder, 1878: 253-4)." I have found no such designation on a map. By distance and description it appears probable that "Juniper Mountains" is the wooded portion of Hurricane Ridge east of the L. A. Iverson Ranch about 5 miles north of

<sup>1</sup> Map references, U.S.G.S. 1 : 250,000 series: NJ-12-4 Richfield sheet; NJ-12-7 Cedar City sheet; NJ-12-10 Grand Canyon sheet; NK-12-11 Salt Lake City sheet.

Trumbull P. O. This is the western fringe of the wooded area in which is located Mount Trumbull. The specimens collected suggest a more open and drier locale than either Mt. Trumbull or Mokiah Pass. NJ-12-10.

Littlefield, Mohave Co., Arizona: 1846', T40N, R15W, 36°53'N, 113°56'W. According to McVaugh (1956: 148) "The modern name of Beaver Dam is Littlefield." It is about 38 miles southwest of St. George by U. S. Highway 91. This is desert country. It is the type locality of *Pholisora libya* (Scudder) and possibly of *Apodemia palmerii* (Edwards). NJ-12-10.

"Mokiah Pass," Mohave Co., Arizona: summit about 5200', T39N, R12W, 36°48'N, 113°33'W. Although not named on any map I have seen, this appears to be the pass used by the Arizona continuation of Utah Highway 64 about 20 miles south of St. George. The highway approaches the pass from the north by means of Mokiah Wash. The pass itself lies in the saddle between Wolf Hole Mountain and Seegmuller Mountain in open forest, with patches of grassland, on the basis of the collected specimens. NJ-12-10.

Mountain Meadow, Washington Co., Utah: 6000', T37-38S, R16W, ca. 37°30'N, 113°37'W. An extensive open grassland about 40 miles north of St. George on Utah Highway 18. NJ-12-7.

Mount Trumbull, Mohave Co., Arizona: summit 8028', T35N, R8W, 36°25'N, 113°08'W. "The specimens were collected about a spring at the base" (Scudder, 1878: 253). At the southwest base of the mountain is Nixon Spring, approx. 7500', accessible by wood road east of Trumbull P. O. This can be reached from St. George, Utah, via Utah Highway 64, and its continuation southward in Arizona. Specimens reported from the station suggest an open pine forest with some grassy areas. Mt. Trumbull and its associated mountains are in a portion of the Kaibab National Forest. NJ-12-10.

"North Creek" See Beaver.

Paragonah, Iron Co., Utah: 5880', T33S, R8W, 37°53'N, 112°46'W. A small town on U. S. Highway 91 at the western flank of the Wasatch Mountains situated in arid land where Red Creek leaves the mountains. Four miles southwest of Paragonah is Parowan, a larger community, similarly situated. According to McVaugh (1956: 270-271) the insects from Paragonah actually were collected at Parowan (July 3-10). Others came from the mountains along Red Creek (July 10-11). The "Paragonah" specimens suggest open grassy hillsides in the juniper-pine zone. NJ-12-7.

"Pine Mountain," Washington Co., Utah: "20 miles north of St. George" (Scudder, 1878: 253) and thus probably in T39S, R16W. It appears to be the pine-clad low mountains west of Utah Highway 18 running north from St. George in the Santa Clara River valley and about 4 miles southeast of Central P. O. Specimens reported are characteristic of open pine forest. NJ-12-7.

"Red Creek" See Paragonah.

St. George, Washington Co., Utah: 2754', T42S, R15W, 37°06'N, 113°33'W. A thriving small city in an agricultural and mining area that Palmer used as a base for operation from December 1876 through most of June 1877. Situated on U. S. Highway 91. NJ-12-7. Probably the type locality of *Apodemia palmerii* (Edwards).

Spring Lake, Utah Co., Utah: ca. 5000', T9S, R2E, 40°00'N, 111°45'W. This is Palmer's "Spring Lake Ville," the original homestead of his St. George friend Joseph Ellis Johnson. NK-12-11.

#### LITERATURE CITED

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