

C. A. Purpus: His Collecting Trips in the Sierra Nevada and Owens Valley, California, 1895-1898

BARBARA ERTTER
University and Jepson Herbaria
University of California
Berkeley, California 94720

Abstract

Carl Albert Purpus was a pioneer plant collector in southeastern California whose chronicles and collections are of historical interest. His collecting trips in this area began in 1895 near Mt. Whitney. The following year he left his winter home near Springville and travelled up the Middle Tule River to the headwaters of the Little Kern River and down Cottonwood Creek into Owens Valley, returning by much the same route. In 1897 he collected first in the Piute Range of Kern County before crossing Walker Pass enroute to the Argus Range, after which he collected at the headwaters of the Kaweah River. In 1898, a drought year, he crossed Walker Pass again and proceeded north through the Argus Range and Owens Valley to Westgard Pass. He spent the rest of the summer in Nevada and Utah before returning through Fish Lake Valley and Sonora Pass. During these trips he collected the types of over 30 new taxa from southeastern California.

One of the most significant but least known of the early collectors in the southern Sierra Nevada and desert ranges to the east was Carl Albert Purpus, a German-born botanist who first came to the United States as a collector of winter-hardy plants for the Darmstadt Botanical Garden, where his brother, Joseph Anton Purpus, was head gardener. During the years 1895-1898 he collected nearly 2000 numbers, including the types of over 30 taxa, from the southern Sierra Nevada, adjacent mountain ranges, and the Owens Valley. He became a "freelance" collector, depending for income on sales of seeds, cacti, pinecones, and anything else the German market would pay for. Sets of his her-

barium collections were also available for sale, resulting in the wide distribution of his specimens. In addition, he wrote numerous articles on natural history that were published in popular and technical German magazines, covering topics as diverse as rattlesnakes [Purpus, 1896c] and redwoods [Purpus, 1896a].

Although Purpus's later years in Mexico and that itinerary have been studied and published elsewhere [Soussa, 1969], his United States travels have been relatively unknown. This is the first in a series of presentations to fill the gap. Most of the following information is derived from my translations of a series of articles describ-

Barbara Ertter

ing his journeys from 1895-1899 [Anonymous, 1896; Purpus, 1896a, 1897, 1899], mostly published by the German Dendrological Society, and from his field notes and letters to Katharine Brandegee quoted here verbatim (archives of the University Herbarium, University of California, Berkeley).

Purpus apparently first moved to California in 1894, where he probably stayed initially with his cousin Nettie in Potter Valley, Mendocino County. He soon acquired a winter residence in Daunt, on the outskirts of Springville, Tulare County. During this period he made contact with Katharine and Townshend Brandegee, with whom he maintained a close interaction. He sent them the first set of his collections, refusing to accept payment even though he depended on the sale of specimens for his livelihood. Townshend described most of the new species he collected, including the genus *Purpusia* in the Rosaceae, while Katharine was apparently a partner in his cactus-selling venture.

Purpus's first summer in the Sierra Nevada was 1895, spent in the area around Mt. Whitney. The article [Anonymous, 1896] describing the area to his German audience is full of the superlatives that characterize Purpus's writing:

"One feels overwhelmed, as if placed in another world, when viewing these gray-white giants...All these toothlike peaks drop precipitously eastward in every sense of the word, the easternmost more than 3400 meters straight down into the Owens River Valley. The view from this precipice is truly terrifying."

"The sight of the giant trees of *Sequoia gigantea* is truly awesome. One feels

completely overwhelmed, in another world, when seeing these monuments to ages long past for the first time."

"In granitic gravel below the volcano, I encountered a low mat-forming *Allionia* unknown to me, which was completely covered with rose-red flowers, providing a sight lovely beyond all description."

This last was in reference to a new species he collected on this trip, *Abronia alpina* Brandeg.

Purpus returned to the Sierra Nevada the following summer. His descriptions of his travels in 1896 [Purpus, 1896b] are somewhat less effusive, but more descriptive of his actual route. He left Springville with a guide and several pack animals in June and headed up the Middle Fork of the Tule River. They were forced to camp until the middle of June waiting for the snow in the passes to recede. He explored Mt. Moses and camped for ten days in Hockett Meadows, ascending the surrounding peaks, before continuing to the headwaters of the Little Kern River. Many of his collections from this region are from Farewell Gap, between the Kern and Kaweah drainages.

After a fortnight they headed down the Little Kern River to Lyon Meadows and Trout Meadows, where they were caught in a violent hail-storm. They crossed the swollen river and proceeded up Golden Trout Creek, which Purpus called Whitney Creek. Purpus refers to his next major camp and collecting site as "Monatchy Meadows," but because he describes Olancha Peak to the southeast, he was apparently in Strawberry Meadow instead. He climbed Olancha Peak and described the "fantastic view overlooking the

C. A. Purpus

Owens River Valley with the deep blue Owens River Lake." One of the plants he collected on Olancha Peak was a *Monardella* that remained undescribed for over 90 years.

Purpus then descended into the Owens Valley via Cottonwood Creek Canyon. He collected around the alkali lake and surrounding desert, including an excursion to the Coso Mountains. After several weeks in the Valley, they began their return trip. Enroute Purpus climbed Corcoran Peak, or "Old Mount Whitney," and collected again around Farewell Gap and the Little Kern River.

He returned to Springville at the beginning of September, but set out soon after to return to Cottonwood Creek Canyon. To avoid the danger of snowstorms in the high mountains at this late season, he took a southern route over Walker Pass. His goal was to collect seeds of *Chamaebatiaria millefolium*, which he considered one of the loveliest shrubs in the eastern Sierra Nevada: "A more beautiful shrub than this magnificent one cannot be imagined." On his return trip he again explored the Coso Mountains, although most of the annuals were long past. He arrived back in Springville in late October, after a journey he said was "blessed with perfect weather."

In early May of 1897 he and his companion again headed for Walker Pass, this time with a wagon [Purpus, 1897]. After camping at Deer Creek, they passed by White River: "Gold mining had once been attempted here, but the venture was not very productive." They camped at a spring in Linns Valley and then followed an "excellent, well-shaded trail [that] led rather steeply uphill to Greenhorn Pass," stopping partway

up at Cedar Creek, "a small, crystal-clear mountain spring." He noted *Garrya* laden with fruit, "called 'quinine tree' because all of its parts contain a terribly bitter substance."

On the eastern side of Greenhorn Pass, Purpus was treated to "a beautiful view of the green valley where the North and South Forks of the Kern River meet, bounded by steep, rather bare, rocky mountains," now the site of Isabella Lake. They crossed the Kern River and headed south to Hot Spring Valley. His goal was the Piute ("Pah-Ute") Mountains, where he planned to spend a few weeks botanizing. They proceeded up Erskine Creek and camped on L. B. Hobson's ranch at the foot of what he calls Piute Peak, which from all indications is probably present-day Lookout Peak.

Among the new species he discovered in the Piute Mountains are the lovely *Delphinium purpusii* Brandeg. and *Astragalus subvestitus* (Jepson) Barneby. In a letter dated May 23, 1897, he describes "an other Echeveria, which is all together different from *E. purpusii*. It grows on Granit[e] and limestone rocks and has smaller leaves and stroh colored flowers." This is the plant that has recently been described as *Dudleya calcicola* Bartel & Shevock. His published travelogue mentions a *Cupressus* he did not recognize, an obvious reference to the endemic Piute Cypress.

Purpus left the Piute Mountains mid-June and proceeded through the valley of the South Fork of the Kern River to Walker Pass. He describes the stand of Joshua trees that spans the pass, which "presented a very interesting, remarkable sight, and gave the landscape a southern char-

Barbara Ertter

acter." After camping at a willow-shaded spring on the east slope, they headed on to Indian Wells. He writes:

"To the left rose the wonderfully sculptured peaks of the Sierra, bare or sparsely forested with *Pinus monophylla*. To the right were the dark, volcanic ridges of the El Paso Range, and to the northeast, the bare peaks of the Argus Mountains and part of the Coso Mountains. Between the reddish gray mountains rose a dark red to black extinct crater very characteristic of these mountains. The places where lava had flowed down the mountain slopes and poured forth onto the plains were very interesting. It looked as if such areas were shaded by clouds while the lighter parts of the mountains were in the full glare of the sun."

From Indian Wells they crossed the desert to the east, arriving that evening, tired and thirsty, at Salt Wells. The next morning they continued north to the Argus Mountains. Purpus explored the Argus Range until the end of June, based first at the mouth of Mountain Spring Canyon and then at the foot of Argus Peak. He also visited Maturango Peak, admiring the view east to the Panamint Mountains. According to Purpus [1897], the Argus Range derived its name from the numerous scattered shrubs, which give the slopes the appearance of having a hundred eyes.

On his return trip, Purpus backtracked to the Piute Mountains, where he collected for two more weeks. He then returned to Springville for a month-long recuperation, after which he collected around the headwaters of the Kaweah, Little Kern, and Middle Tule rivers until late September. In a letter sent from Broder's Cabin in Mineral King (8 September 1897), he writes:

"I had a very bad experience with Capt. Gale, who is superintendent of the Park, as he was about ready to turn me and my man, who helps me collecting, out of the park, although I had a letter of introduction to him by the General from last year."

It sounds as if Captain Gale were more effective in barring botanists than sheep from Sequoia Park, based on a letter from the previous year (19 December 1896):

"It is of no use to go a third time into these Mountains, because I think I have collected almost everything worth collecting and because the feed in that big sheep pasture--the Sequoia park not included--is getting so scarce, that it is quite impossible to stay in one place for more than three or four days. It was worse this summer, than I ever seen it before and I would not have been surprised to see some of those Basks with their flocks on the very top of Mt. Whitney; They pretty near reached the top of Old Mt. Whitney though, and when they had cleanded out every grass spot in the so called reservation--that name is nothing but a mockery, the[y] went into the Sequoia park although protected by soldiers of the U. St. Army."

Purpus could be very outspoken in his letters, and overgrazing by sheep was certain to trigger an outburst (4 December 1895):

"Yes, those sheepmen and their flocks ought to be exterminated unter all circumstances, they sooner, they better. It is not only a pity, no it is a shame and a sin to see those nasty sheep ruining that wonderful Mountain region and it's flora. It was more, than I could stand, and it made me so mad, that I more than a dozen times a day said to my guide 'I could kill every one of those sheep,' although I never kill animals except rattlesnakes!...."

The only group who received equal condemnation were "the woodchop-

C. A. Purpus

pers" in the Sequoia region (14 September 1895):

"It is simply an outrage and I got so mad about it that I felt as if I ought to pick up a club an[d] knocking them down."

At the end of April 1898, Purpus and his companion, a man named Fred Noller, left Springville with a wagon for his last expedition through the southern Sierra Nevada and Owens Valley [Purpus, 1898]. His goal was to cross southern Nevada and Utah to the La Sal Mountains, but because of poor roads and drought conditions, they turned around at St. George, Utah. They followed their route of the previous year, crossing Greenhorn and Walker passes to the Argus Range, where they stayed at the camp of Georg Vornberg, "a friend of mine from Baden [Germany] who owns several gold mines in the area," at the foot of Argus Peak [Purpus, 1899].

A letter written from the Argus Range (9 May 1898) is one of Purpus's more entertaining ones, including references to the drought conditions, the difficulties in pressing plants in the desert, and his contacts:

"It is a great pity to see the cattle starve to dead on the desert, but it is a frolic for me to see the sheep die[.] there will be about half of them left next fall which is a good thing."

"I try the best to press the plants as nice as possible, although it is very hard sometimes on the road. Coming through the desert, I had spread some plants out to dry near Salt Wells, covered with rocks. There came a whirlwind and away went one bundle sky high. I got the plants and paper again, but not in good shape. I was raging made [sic] about it."

"At Indian wells I made the acquaintance of Mr. Austin superintendent of the schools in

Inyo Co. at Independence. He asked me to see him and his wife, who he says was a enthusiastic botanist. He told me Mrs. Austin had received a beautiful *Astragalus* from a schoolboy with scarlet flowers he did not know the name. I told him it was very likely *Astra. coccin. Brandegee*. Mr. and Mrs. Austin will be very valuable acquaintances."

Purpus explored the eastern part of the Argus Range before crossing Junction Flat and skirting the northern portion, which he called the Madurango Range. He then crossed the desert to Darwin, over the northern edge of the Coso Mountains, and along the edge of Owens Lake to Keeler.

"Our route traversed sparsely vegetated volcanic mountains, dark brown or burnt red, with a variety of extinct craters. We made camp facing broken volcanic rockpiles on top of the pass. The next morning we travelled through an exceptionally sandy region to Owens Lake, where we camped for a day next to a warm sulfur spring. The following day our journey continued to Keeler, situated in the center of a dry lake bed. To the east of Keeler rose the deeply carved ridges and craters of the Inyo Mountains, with *Pinus monophylla* on its highest peaks. To the west, the snow-covered teeth of the Sierra Nevada ascended, blanketed in clouds."

Purpus and his companion arrived at Lone Pine, above which Mt. Whitney "rose like a gigantic tooth amidst a row of lesser peaks of similar shape, dropping vertically into a small valley" [Purpus, 1898]. From here they continued up Owens Valley to Independence and on to Big Pine, where he noted an abundance of *Prunus andersonii*, as well as *Forestiera neomexicana*. They then turned east towards Westgard Pass, collecting for two days at the "Tollhouse."

Barbara Ertter

"We were presented with a magnificent view of the freshly snow-covered high peaks of the Sierra Nevada, shoved together like the side wings of a theater stage."

They crossed the pass and descended into Deep Spring Valley, arriving May 19, "a magnificent day." He describes his journey:

"The route was at first rugged, then relatively flat through stands of *Pinus monophylla*, and then over a high plain beyond which we descended gradually into the valley. Deep Spring Valley is a meadow-filled valley enclosed by mountains, with a small lake located at its lower end. The lake is fed by strong springs on its southern banks. Here I rested a day and found at the lake's outlet the beautiful *Philadelphus microphyllus*, which until now had not been found in California."

Purpus also explored the mountains south of the valley before crossing over to Fish Lake Valley:

"The southern end is for the most part desert, but the northern end is well watered and covered with grassy flats. The Palmetto Range and Red Mountains are to the east, and to the west are the White Mountains."

That night it rained in the valley and snowed in the mountains, giving the landscape a wintery appearance. The next day they crossed the border into Nevada. Here they spent over a week in the Palmetto Range and Gold Mountain, waiting for the neck of one of their mules to heal. Fortunately the collecting was good (28 May 1898):

"I must say the whole mountain range is a perfect paradise for botanists at the right time and I guess I got here just in time, although for the high mountain flora it is much to early."

In his next letter (2 June 1898) he describes some of the added features that made the area one of his more productive stops:

"We camp at the Stateline mine, which is shut down for many years and I have rooms to dry my plants, to separate them etc as large, as Your herbarium and this is a very great accomodation because outside I could do nothing the wind is blowing sometimes so strong, that it takes our plates away...In the building where I dry my plants I have about 8 tables. I hardly think, that I will find an other place like this. Mr. Stewart who is watching the property of the Compagny[sic] is a very nice man and he takes a pleasure to help me in my work he is also a very valuable acquaintance for the future...He also knows places where is thousands of *Calochort[us] aureus* or *C. Kennedyi* v[ar]. *aur[eus]*. On account of the very dry season it has not come up this year, so he will have them collect for us next year by squaws. He sent out a squaw after it but she could not find a single stem...."

"It is a big difference between these mountains and that Big sheep Pasture called Sierra Nevada, here are no sheep at all, because they can not come them in and that is the reason I make such a fine collection."

After his journey to St. George, Purpus returned to the Palmetto area in August to collect seeds and late-season plants, during which time he climbed Mt. Magruder. He then proceeded north through Fish Lake Valley and camped at Sand Spring, "A lovely clear spring...located in the sandy waste on the north [east]ern base of the White Mountains." From here he made one last expedition into the adjacent White Mountains before continuing north, across the Excelsior Range, through Bridgeport, and over Sonora Pass, returning to Porterville in October.

C. A. Purpus

References

Anonymous, C. A. Purpus und seine Einführungen, *Moller's Deutsche Gartn.-Zeitung*, 11, 109-112, 1896.

Purpus, C. A., *Sequoia gigantea* Torr., *Forstl.-Naturwiss. Z.*, 5, 198-201, 1896a.

_____, Bericht über meine diesjährige Sammeltour durch die südöstliche Sierra Nevada von California, *Mitt. Deutsch Dendrol. Ges.*, 5, 229-235, 1896b.

_____, *Crotalus lucifer*, *Natur. & Haus*, 5, 361-363, 1896c.

_____, Bericht über meine Tour in die südliche Sierra Nevada und die

Argus und Madurango Ranges, *Mitt. Deutsch. Dendrol. Ges.*, 6, 313-318, 1897.

_____, Bericht des Herrn C. A. Purpus über seine Tour in das Wüstenbeget des südlichen und mittleren Nevada, nordlichen Arizona und westlichen Utah, *Mitt. Deutsch. Dendrol. Ges.*, 7, 404-416, 1898.

_____, Eine Succulententour in das Wüstengebiet des südlichen Nevada, des nordwestlichen Arizona und des südwestlichen Utah, *Monatsschr. Kakteenk.*, 9, 49-52, 65-66, 1899.

Sousa, M., Las colecciones botanicas de C. A. Purpus en Mexico, *Univ. Calif. Publ. Bot.*, 51, 1-36, 1969.

