

About the 1902 Shasta County Expedition account

The account of the 1902 expedition was kept by participant Katherine Jones. A typed copy of it resides in the Museum of Vertebrate Zoology (MVZ) archives on the third floor of the Valley Life Sciences Building (VLSB).

The location of Katherine Jones's original notes is unknown, but correspondence in the MVZ archives suggests that she held onto them. At least one—and probably two—copies were made of the notes. In a letter from MVZ's Joseph Grinnell to Jones, dated December 16, 1932, Grinnell asks that a copy of her 1902 field notes be sent to Annie Alexander because the latter wanted "to complete her own records of her various field trips prior to 1908, when MVZ was founded." Two years later, Grinnell wrote to Jones again following a conversation with her about having a copy made for MVZ. "If you will deliver them [the notes] to his [a messenger's] care, we will have them copied and return the original to you quite soon." So it would appear that the typed copy now in the MVZ archives was typed by an unknown staff person at MVZ in 1934. A pdf of this document can be viewed at <https://archive.org/details/paleontolog-icale00jone>.

MVZ's 1934 copy

The 27-page typewritten copy is preceded by two pages concerning Amanda Brock, written by Jones sometime after the expedition. Underlining of scientific names is inconsistent—some was done on the typewriter and some by hand; many scientific names have no underlining. A few handwritten edits were made to the typed text. There are one or two question marks suggesting that the person doing the transcribing had trouble making out some of the words in the original notes. Apparently, Jones had made some small drawings to accompany her text and the typist tried to reproduce these by hand as in-line graphics. There are occasional typos; poor grammar and sentence structure are common. Whether the typos are original or were introduced by the typist is impossible to say. There are a few places where the typist added comments in brackets.

The 2018 copy

With the permission of the MVZ, the typed copy was transcribed as a Microsoft Word document and a new, searchable pdf was generated after formatting it in Adobe InDesign, October 2018. No changes to spelling, capitalization, punctuation or grammar were made. Text that is underlined in the typed copy was underlined in the new text document; centered text was centered and text in all caps was entered in all caps. A blank line was added between each day's entry; indents for the first paragraph of each day's entry were eliminated. The small drawings are not reproduced but their placement, usually with a brief description of the drawing, is indicated with bracketed, italicized text; new editorial comments are also in bracketed, italicized text.

NOTES OF MISS KATHERINE JONES
PALAEONTOLOGICAL EXPEDITION, UNIVERSITY OF CALIFORNIA
SHASTA COUNTY, CALIFORNIA, JUNE 16, TO JULY 13, 1902

(The party was composed of Miss Annie M. Alexander, Dr. John C. Merriam, Mr. Osmont, Mr. Eustace Furlong, Mr. Schaller and Miss Katherine Jones.)

Spring Camp.

June 16, 1902. Here we are at Spring Camp, with our journey at an end. We started from 16th Street, Miss Alexander and I, Sunday night at 8:45. On the sleeper we found that a man claimed one of our berths. The Porter looked at the tickets and a smile played about his mouth when he saw that both were for the same berth. The man was moved to another section and we were so tired that we soon turned in. We would have slept very well had it not been for the parties who had to rise early. They were so afraid of missing their station that they fussed and stewed an hour or two beforehand. At Port Costa we found that the Solano [*a rail ferry*] was out for repairs, so we had to go by the way of Stockton. This made us three hours late, so that when we reached Redding the stage had gone. Miss Alexander hired a rig and we had a glorious ride from Redding to Winthrop. We stopped and gathered flowers all the way, but most of them were new to me. The grasses were *Bromus maximus*, *Bromus hordeaceus*, with an occasional *Elymus*. The *Festucas* had nearly all passed. At Winthrop we labeled the flowers and sent them to Berkeley on the next Wells Fargo stage. While sorting over these plants, a gentleman (Mr. Webb, a U.C. boy) came to us and told us that he had collected flowers for the Geological Survey under Davidson. I then begged him to do some work for the University of California and he says he will collect a few for us next September. He then told us he was collecting fish for Princeton and brought us a bone of a reptile. Miss A. ran for Mr. Osmont and the latter got all the information he wanted from Mr. Webb. We were very much excited when we learned that Princeton was on our territory, but we decided to go on and work the same as we had intended doing. Mr. O. had intended to go to this Princeton claim and did not consider that what he had found out from Mr. Webb would change the plans. After a lunch at the hotel we rode to Mr. Matteson's [*Madison's*] place through a beautiful country. Mr. Matteson [*Madison*] told me that Mesquit-grass (*Holcus lanatus*) was the most beneficial grass he had on his place. He could plant a small plot and in 4 or 5 years he would have a large lot of thick grass. It does not die out. He also told me that Blue-brush (*Ceanothus*?) was a splendid feed for cattle, the best of any about.

At Mr. Matteson's [*Madison's*] we mounted our horses to ride to camp 2½ miles away. It was my first experience at riding astride but my noble horse carried me without a mishap over the rough mountain trail. Dinner was ready, consisting of oyster soup, beans and batter cakes with maple syrup. We soon went to bed and I slept very well considering that it was my first experience at really camping out.

June 17, 1902. After breakfast (mush, hot cakes and beans) at 6 o'clock we started for the limestone fossil rocks about half a mile away. We went into the cove where Professor James Perrin Smith had gathered so many of his Ammonites and where the slab of saurian was found. It had been lying on the slope of the hill fully exposed. These rocks are of Triassic formation and very much metamorphosed. We could get very few fossils from the highest rocks as the heat seems to have destroyed them. Miss A. and I worked faithfully all day. It was pleasant in the morning but in the afternoon the sun beat mercilessly on our poor heads. We explored the cliffs to the north

but found nothing but caves in the rocks. We had beans, crackers and peaches for lunch (which was eaten under the pine tree) and water from our canteen. On the way home we saw the point where Shastasaurus Osmonti had been found—the two specimens. Mr. O. found some broken fragments of the rocks and afterwards the larger pieces in the cliffs above. It was exciting work getting such a big find. We envied Mr. O. as he told his tale. That night we sat on the ground near the cook stove and listened as Mr. O. told how he worked for two weeks steadily, while in Nevada, without finding a single fossil. He was with Dr. Smith and party from Stanford. At the end of two weeks of hard work they found two pockets of fossils, either one of which would have paid them for the trip. One of these pockets was the finest that Dr. Smith had ever collected in and he had been everywhere in the United States and also in Germany. At these pockets Mr. O. and his Jap collected 10 boxes of specimens in practically two days. They worked at an elevation of from 6000 to 7000 feet and the exertion caused nose-bleed for the whole party. While on the mountains they had a snowstorm for several hours. After that it was pleasant until toward the end of the trip when it became so unsufferably hot that Mr. O. became ill. The fossil beds were exhausted anyway, so they left.

Mr. O. said that in the John Day beds of Oregon he frequently came on to soft cliffs where the skull of a dog or sabre-tooth tiger, etc. were grinning at him, begging him to release them. It [was] a wonderful collecting ground both for the number of species and for the number of individuals in a species.

June 18, 1902. We worked the cliffs back of the cove of Ammonites. We covered a great deal of ground that day. Miss A. found the first bone—a vertebra—and I found a tooth and a bone something like that of a rodent's jaw. Four vertebrae and rib bones were found that day. We worked at the circle of cliffs and saw that the limestones had a spur not set down in the Geological map. We will work this ledge before we go to Kelley's. Bromus hordeaceous, Elymus and Sitanion are very abundant here. I also found Melica Californica (?) and Festuca (spreading variety) as well as another curious Brome.

Mr. O. worked in the west Humboldt range in Nevada. The first important finds were made in Cottonwood Cañon, the first important cañon south of Union cañon near Unionville. In Cottonwood there were lots of Ammonites, showing that it belonged to the upper Triassic, and lots of vertebrate material. Nothing was in place, jaws, limbs, shark's teeth, a few large vertebrae and large limbs. The other locality was about four miles south of Unionville and about 1½ miles from Spring Valley Pass in South American cañon on the low divide about 5000 feet above sea level on the south side of South American cañon. Found Ammonites in place, showing that it was in upper part of the Middle Triassic. The vertebrate remains were all found in place, 4 different individuals in place, large saurian, ribs 1½ in. in diameter, vertebra 4½ x 5½ inches. W. Humboldt N.E. strike. Star Peak 9920 feet in elevation. Peculiar fossils were close to the contact of the limestone and metamorphic shales underlay the limestone, and over that found these shales intruded with the limestone that in the metamorphic series is the same age as the limestone, i.e. Middle Triassic.

June 19, 1902. Today the party decided to separate, the men to work on the cliffs back of the cave [*sic*] and the ladies in the cove. We were in sight of each other most of the time and the air was so clear that we could distinctly hear them talk. About 11 o'clock a bear or other animal startled a deer and it was a pretty sight to see him come down the hill leaping over brush and making the trip in two minutes which would take a man 15 to 20 minutes. The ladies worked in the cove and around on the home side while the gentlemen worked on the hill to the east of the cove. They found a limb bone, 6 vertebrae, a rib and a stone full of fossil bones, while I found two separate stones full of bones.

June 20, 1902. We all worked about the high hills back of the cove. We saw neither the deer nor the bear and worked hard all day toiling up and down that high hill in the sweltering heat. Mr. Schaller found

several vertebrae, Mr. O. found a rib, Miss A. found a bone and when Mr. F. split it up there was a fine paddle. I found nothing that day so was quite discouraged. The others were pleased with their luck.

June 21, 1902. I went to De Lemar with Mr. O. We walked to Mr. Matteson's [*Madison's*] and sat under the same tree that the Professor James Perrin Smith party of the year before used to sit and smoke under every day because it was half way down from the cove to their camp at Matteson's [*Madison's*]. This party went up that trail every day for fossils and walked back again at night. This was done to please Professor Smith of Stanford who wished to reduce his weight. It is 2½ miles up the mountain trail and was enough to kill the men. Even Professor Smith had enough of it in six days. At Mr. M's we secured our horses and had a very pleasant ride. I bought material for a short skirt and went to Rosa at the Bauman [*Baumann*] Hotel to see if she knew where I could get a sewing machine. The kind hearted woman took me to Mrs. Englehardt's, where I fell to work with might and main and soon had my skirt done. I found this family to be composed of five persons and very poor. They reminded me of the McCabes in C. I gave the woman a quarter to buy her little girl a parasol which she was very desirous of procuring for the 4th. Mr. O. and I were to have had luncheon at Bauman's [*Baumann's*] but at 3:00 I gave him up and began to plan how to get word to him. On inquiry I found that he had to go out of town to have the horses shod and would not be back for some time. He returned about 5 o'clock, looking very pale but I supposed this was due to his having shaved. We went in to dinner but he was so ill that he had to leave and go lie down. At 7:30 I became alarmed because I knew we could not get home that night if we tarried any longer so I went up to waken him. The landlady asked me if I were looking for my husband and this was the beginning of our camp joke. Mr. O. felt better and got up at once and we started. It was cool and pleasant until we reached Matteson's [*Madison's*]. Here we were getting more camp provisions when we heard Mr. Schaller calling to us from the side of the mountain to meet us. On assuring him that no accident had befallen us he went to camp to tell the news. They had been very much worried about us but of course we were forgiven when we told the circumstances and especially about the husband matter. They joked us a great deal about it. It was 10:30 before we got to bed so I had gathered no fossils that day. Miss Alexander had a slab of 10 vertebrae and other bone and up above the caves Mr. F. found a limb bone and a slab with bones in it.

June 22, 1902. This being Sunday we thought we would rest and went down to Mr. Matteson's [*Madison's*] to spend the day. The horses had to be taken back. One was loaded with fossils and the other they insisted on my riding, much to my distress, for I do not want to be selfish all the time though it is nice to be selfish some of the time. Miss A. walked all of the way and had sore feet in consequence. At the ford Miss A. rode over the stream behine [*sic*] me, I dismounted and she went back for Mr. Osmont, who in turn went back for Mr. F. We sat under the cherry tree and had a good rest while we ate cherries. Down by the brook I saw a chiton-like creature crawling on the rock. It was something like our salt water chitons but was in a fresh water stream. Is there a fresh water chiton? On an alder tree I saw a little hummingbird's nest. It was four times as large as a thimble and nestled on a lower branch, looking for all the world like a knot on a tree. The mother bird was feeding the little ones, of which there were two in the nest. This hummingbird was not like either of the kinds we usually see but had a mottled gray throat. In the brook below were land snails, skaters, water beetles and various curious larvae and eggs. Fish about a foot long were also in the brook. Mr. O. caught 5, which we had for supper later. Miss A. took a swim in Squaw Creek and found it delightful. She had to make quick work of it as some boys were also going in at the same time. While she was dressing the hunter came along (p. 17 [*line drawn through "p. 17"*])). We had supper of crackers and milk and left Mr. O. at Mr. Matteson's [*Madison's*] to get the wagon out in the morning while we went ahead by the trail. It is a long climb but I gathered flowers on the way and hope to make a good collection. We found supper ready and that we had the fish—a very good meal.

June 23. Miss A. was up at 4:30 and after an early breakfast we four went to the cove to work on the hill again. We worked hard all the morning with no results. We felt that it was time to abandon the cove. Miss A. and I worked up about where Shastasaurus Osmonti had been found. The rocks were very hard and almost barren of fossils. I had found a fragment but the rock was too hard for us to get it out. We had worked hard getting all the remaining bones of Shastasaurus Osmonti in a pile only to find that they were of no use. I hope Dr. Merriam will take them back. We went to camp early and soon had a sprinkle of rain. I got in our beds and every thing else that was not under cover and we had just cleaned up when we heard the familiar voice of Mr. O. calling Hello. He stated that the wagon was not badly injured. As he had thought, all the spokes in the hind wheel were broken and had to be replaced and the iron of the top part. Neither Mr. Schaller nor Mr. Furlong had any but had col (?) [*sic*] and we felt quite discouraged.

June 24, Tuesday. Mr. O. and Mr. F. went to Brock's to see if they could get sight of the fossil in the rocks left there by Mr. Herbert Furlong. They had a hard tramp and did not succeed in getting to it. Mr. S., Miss A. and myself spent the extra day on the shale beds near camp and succeeded in getting many pretty things here. This was Mr. Smith's special find and was considered important because Mr. O. said that Dr. Smith's party had worked one-half day looking for fossils in this shale and did not find any except a fragment or two of ammonite. From this fragment Dr. S. thought it was Middle Triassic (?). When we came to camp Mr. S. was too busy putting away his shells and he had not got any wood for us to cook dinner. I was afraid Miss A. would cut her foot with the axe. Finally we had the dinner under headway when Mr. O. and Mr. F. came in tired and hungry and no dinner ready. I thought they looked disgusted, especially when they found we had planned no soup for dinner but we soon had things in good shape with their help and spent a pleasant evening.

June 25, Wednesday. Mr. Osmont had to go to Mr. M's again to get provisions and the rest of us worked on the trail to Brock's. Miss A. found a vertebra and _____. Mr. Schaller found two vertebrae—a large iand [*sic*] a small one and I found two [*two crude outlines of the vertebrae*], and a vertebra. As Miss Alexander's feet were still lame, we started for home and stopped by the brook to water the animals. Here I saw some tree frogs, a condrotui, some newts, a pair of skaters, water snails, water beetles and the tracks of a coon. The [*drawn circle with a dot in the center*] (Indian Rhubarb) water plant with a round leaf was here (Saxifraga peltata [now Peltiphyllum peltatum of Jepson]), as well as at Matteson's [*Madison's*], and the columbine and Delphinium were abundant.

I watched Mr. Bullfrog stay under water at least a quarter of an hour after coming to the surface to get air. How long can they remain under? The skaters move both fore and hind feet in swimming, but mostly the hind feet. I gathered a number of flowers and near the top of the hill Mr. Osmont met us with the horses and we came into camp. The men lay on the ground and smoked rapturously after supper.

June 26, Thursday. Mr. Osmont and Mr. Furlong went to Brock's again, this time on horseback. Mr. Schaller worked the shale and Miss Alexander and I tried the rocks to the north of the cove. She found a rock with many bones in it and we both spent several hours trying to find the rest of the creature. I found a vertebra. We both decided we had worked the cove as much as we cared, and went home. On reaching there we found the tent down and the men getting ready to move to Brock's. They took down the stove and all our extras and packed them on Pat and Dolly. Pat was cinched rather tightly and groaned in agony with his burden. Dolly was a stronger animal and did not seem to mind her load. When the men were gone we got supper and Mr. Schaller was very good about it. We had a nice campfire and sat around it. I noticed a wasp's nest of this shape [*small drawing of the nest here*] on the rocks. Wasps went in and out of

the funnel. They appeared to be gathering either pollen or honey.

June 27, Friday. The men did not come home that night as it was too late but they arrived soon after we had breakfast. It seemed queer to sleep out without our tent but we got along very well indeed. Mr. O. told me on his arrival that he had more work for me and I spent several hours trying to make bags. Mr. F. and Mr. O. packed up the other things and placed them on the horses. Before they had quite finished they sent Mr. S., Miss A. and myself ahead as they said they would be ready to start in less than half an hour. So we went no farther than the spring and rested, thinking they would be along in a little while and we waited until 2 o'clock. It was beautiful under the trees watching birds and insects but after a while Miss A. and I became so anxious that we went up the hill to camp to see what had happened. As we neared the old camp I saw Mr. O. and Mr. F. quietly cinching up the horses, but they looked as black as thunder. They tried to look more cheerful as we came up and after some time told us that Pat had bucked everything off his back. Then on repacking Dolly had been too heavily loaded and somehow lost her balance and went rolling down the hill into the fireplace. The pack kept her from being hurt but both horses were badly frightened and nothing could be done with them so the men decided to rest them and have lunch. They had no sooner done this and repacked the horses than we appeared on the scene. We all then proceeded down the trail together, picked up Schaller at the old resting place. Mr. O. gave Schaller a dig for letting the ladies come up while he might have done so, and told him to go home if he could not do better. This stirred Mr. S. up a little and he did better the rest of the day. We had supper on beautiful Pitt River at Brock's and slept sweetly on hay in the orchard. We had arrived early and about 4 o'clock we sat on the river bank with Mr. Brock, a half Indian, stout and well built. He spoke of his half sister quite bitterly for she had been taken to S.F. by Joaquin Miller when she was 15 (?) and she married a white man and never came home to see them or sent them word and the mother "Amanda" had grieved all these years and longed to see her. Here I can tell more about Amanda and Joaquin Miller if I do not find it in this notebook.

It seems that Mr. Brock had started his train of thought on his sister from hearing Dr. Merriam tell Brock's mother Amanda that Joaquin Miller's daughter was dead.

June 28, Saturday. After an early breakfast the men went up to the old camp to get the rest of the things. Miss A. worked, I made saddle bags and Mr. S. took another nap. The men were home about 11 or 11:30, just as I finished sewing and while Mr. S. and Miss A. were scaling the limestone cliffs back of the house. Amanda came to see me and told me interesting things about the Indians. It seems that Amanda was captured by the Modoc Indians and carried away into captivity. Nearly all of her own tribe were killed but this time she was kept in captivity for six months, until she contrived to get word to the U.S. soldiers stationed near the Indian camp. They rescued her, attired her in soldiers' clothing (which made her feel as queer as a Turkish maiden whose veil had been torn from her face, for Amanda was an old woman when she told her tale to me but she shrugged her shoulders and looked shy as she thought of her thrilling escape as a white soldier). These soldiers took her back to her old home and she made her way to some friends.

It seems that she married a white man named Brock and had a son by him, nearly middle aged when we saw him, but being both white and Indian he was very bitter, due to the complex blood in his veins, as now explained by modern scientists. Be that as the real reason or not, as our crowd sat in the sand on the bank of Pitt River with Mr. Brock and talked with him one could sense the feeling of injustice and injury that had been done to the half-breed who dressed and looked much like an ordinary white man but who spent most of his time hunting and fishing out in the open. Half-breeds do have two natures strong within themselves and have mighty struggles of their own. My heart went out to Mr. Brock in great sympathy.

After Mr. Brock's father died Amanda married Joaquin Miller and had a daughter by him called Carlante (Carlanto?). It seems that the daughter was also stolen by the Indians but her brother guided the U.S. soldiers to the camp of the Modocs, who had hidden the girl (8 to 10 years of age) under a basket. The soldiers and Brock surprised the Indians by riding in on fast horses, picked up the girl, placed her on a horse and away they went before the Indians knew what had happened. She remained with her mother until she was 15 years old, when Joaquin Miller took her to San Francisco to educate her. There she is still living, according to the last reports, having married a white man, an employee of the Wells Fargo Co. She does not write home and pays no attention to her own folks. Her half brother resents this and the mother mourns and mourns for the daughter she longs to see. This daughter may be from 38 to 45 years old now (1902). I wish she would visit her poor old mother again before the mother dies. Amanda is sitting by me as I write. She is very quiet and evidently thinking of old times—for she said Joaquin Miller used to sit, as I am doing, and write. I heard a bird (Woolwith, Indian name) crying chee - che-e - chee - che - chee, and I said I like that bird. "No", said Amanda, "she no good". Indian no talk to that bird; you talk to that bird, pretty soon you go to the mountains and you see snake". Amanda would not let me talk to that bird. If I began she would motion me to stop for fear I would see a snake. It seems that Amanda belongs to the McCloud Indians and the Indians of northern California tribes were continually warring with one another, especially the Pitt Rivers, Modocs, Squaw Creeks and McClouds. The men get up a war dance, strike out after some tribe, kill the men, capture their women and children. It was a hard battle [*line through "battle"*] fate and was soon followed by reprisals. This warfare quickly decreased the Indian population. There were many of these fights about here, Mr. Brock tells me.

I went into the house to see Amanda's baskets and the materials out of which she made them. It is practically the same as that of the Hupa Indians. Hazelnut forms the framework of the basket which is wound around by bunch grass (unless made by a meadow Indian, when it is apt to be a kind of tule—I saw some on the Pitt River on the opposite shore), or it may be the root of a pine; a fibre from woodwardia fern is colored with alder bark and that is also used. The dark streaks of the basket are a fern. Willow is also used in the construction of the baskets. Amanda makes no more baskets as her hands are getting stiff; but her friends make them and bring them down to her to sell. She may have some when I return this way—if we come this way again. Amanda has her chin blackened in this manner [*drawing of four vertical, parallel, squiggly lines*]. Mr. Brock says it is done by pricking out with a needle and then putting the juice of a certain plant on it. This plant has a blue bell, cup-shaped, about an inch long and often has four or five flowers on it. This juice will not rub off. Amanda has a string of beads [*wavy enclosed shape with a circle in the middle*] of abalone shells, [*drawing of horn-shaped shell*] dentalium, and a few beads. She was proud of it. Said they danced with it about their heads, etc. The dentalium are called cobolis by the Indians. Mr. S. lay in the shade all day and Amanda said, "He lazy, he eat, eat, eat all time". Messrs. O. and F. took the afternoon off to camp and did not return until 10 o'clock. We had our dinner and went to bed and did not hear them when they arrived. They had lost the way and finally went back to the starting point and let the horses find their way out as best they could. In this way they arrived safely at camp at last.

June 29, Sunday. At 5:30 this morning we heard the crackling of twigs but decided not to get up at that time of the day and dozed off again. Later, we heard the whinny of a horse and discovered that the men had arrived. We were glad to see them and know they were safe again. After breakfast, the men had to go back again and Miss Alexander thought she would save time by walking up. Mr. O. thought I might save them the trip back again and suggested my walking up too. This did not seem best and Miss Alexander said she would come back after me. The rest of the party then went on and left Mr. Furlong and myself here, and in about an hour Mr. Madison and Dr. Merriam came in. I was glad to see Dr. Merriam. He

brought no dinner and I went with Amanda to get some of her bread and some radishes from her garden. It is a nice garden near the house, which she cultivated all by herself. She has corn, beans, radishes, melons and potatoes, etc. in it. After eating, Dr. Merriam practiced a little with his revolver and then he and Mr. Furlong started on for camp, leaving me alone until the horses came back after me. So here I am with Amanda by my side telling me all sorts of Indian tales. Here I had time to write up a description of our first camp, which we called Spring Camp.

Description of Spring Camp. This camp is about 2½ miles from Madison's most of the way up hill. It is set in a beautiful spot, near several springs, one near our tent (ladies' tent), one near the cook tent, and one 200 yards below. We have a fine view of various kinds of pine trees, black and white oak, and the underbrush is mostly Manzanita and Ceanothus. The little lizards were fond of hiding under the Ceanothus and popping out at us from their covert or darting up sides like a flash. There are two varieties of them. The country around is made up mostly of range after range of mountains. On the tops of a few are our precious limestone ledges. One in which we worked was about 20 miles long, running NE and SW. The upper part of the limestone is too hard to have retained fossils in good shape, or they never were in that part of the rock at all. The lower part of the limestone was more hopeful and it was here that we secured most of our specimens. We always got a lot of ammonites and various shells from the shale on the hills next to camp and so Professor S's. find was supposed to be a good one because Professor S. tried to find fossils in this shale and only succeeded in finding a part of an ammonite or so. We found fossils also on the shale in the next hill (following the road) was limestone [*sic*]. Miss Alexander and Mr. Schaller also tried the next hill and found fossils in the shale there. They may be in all the shale about there.

Here it is 5:30, and no one has come for me from camp. Amanda says they will not come and I must eat supper with her and sleep in Dave's (Mr. Brock's) bed. I am accepting her hospitality and am in good hands, but what has happened at camp? I will remain here calmly and see what turns up for I do not know the way to camp, even if I tried to go. Amanda will soon make a fire and get supper and I will see what Indian fare is like. Her house has but one room. There is a bed in either corner, one with blankets and the other with a coverlet. There are two stoves in the room, one in the middle for heating and one at one side for cooking. A lot of bags are at the side of the room and here she keeps her white potatoes and various articles of household goods. There are nails on which various articles of clothing are hung. I noted a pair of scissors on one of them. There is a table with an oilcloth cover and two boxes for chairs. There is one rocking chair, which Amanda never sits in—one rocker is broken. There is a little safe above the table. Most of the food is kept in pots and pans on the floor near the door. The cats, tiger-yellow and black, stalk solemnly into the house and try to steal from these pots. Amanda sees them and drives them out with a stick. They do not love her but this is their home and they tolerate her for the sake of the occasional crumbs she gives them. She also has a dog, "Boy", who at one time was a famous hunter, but now he is old and when they try to have him go on a hunt he goes as far as the gate and then sets up a howl and returns. He is a loving old fellow and took quite a fancy to me. He never offered to steal our food and did not touch a bit unless offered to him. I never saw an animal that could be trusted so implicitly. Here it is 6 o'clock and Mr. Osmont has come for me. He looks tired and so do the horses. He says they must rest for a quarter of an hour, but it is near one-half to one hour before we are fairly started. Mr. Brock and Amanda say "Goodbye" very warmly, especially Amanda who says she will dream about Miss Alexander and myself. After we have started a little way she comes running after us to have a last look. She seems to want some remembrance, so I take a bright ribbon from my neck which she seems to admire and give it to her. Poor old Amanda, she is very lonely and is a sociable soul, like her tribe, and she is much alone these days. She says, "Dave goes to hunt and no comes home at night. Me cry all the time". It seems that she is quite a famous woman of her tribe and indeed her affection for me was quite touching. She was sorry

Mr. Osmont had come for me as she would gladly take care of me. Here we are off at last. We must get to the top before dark or the horses will have trouble in keeping to the trail. The latter is very steep from the start and goes up and down from one height to another. The mountain peaks look proudly down upon us and glimmer in the fading light. The ravines grow dark and spook-like and we hurry on the horses knowing that the brush is at the other end. Now we are at the top of the ridge and see the camp-fire glowing in the hollow, apparently not far away; but our troubles have only just begun. We lost the trail at this point and we went up and down strange gullies, climbed trunks of leaning trees and slid down them on horseback, as it were, while it became darker and darker. We could see our camp-fire all the time, now near, now far, and we could hear them talking, and still we toiled on. I felt sorry for Mr. Osmont, as he was laden with a pail, a squirrel, a lantern, a canteen, a camera and my flower press and was trotting up and down trying to find the trail. He did not lose his temper once, though I should not have been shocked in this case if he had, for he had ample excuse. I was obliged to stop Dolly at a place which scarce gave foothold, as I waited for Mr. Osmont to find the trail. Part of the time Dolly was standing on saplings that swayed under our combined weight. Mr. Osmont felt very nervous over it but I laughed, to show him that I was not afraid. Well, in due time we reached camp—at 10 o'clock. Miss Alexander met Mr. Osmont and said she did not know what to think of his keeping me out in this way. They gave us some supper. Mr. Osmont called me a heroine and I called him a hero. When we went to our tent, Miss Alexander was so worried, and the ants bothered her; but we finally composed ourselves to sleep. The new camp was in a shrubby place and so far from water that we decided to move.

June 30, Monday. We moved camp today and Mr. Osmont and Mr. Furlong took over the pack on horses and we followed with small articles in our hands. We lost the way and passed a rattlesnake of 11 rattles—a monster. I saw him in the brush, glittering as he moved to and fro angrily. I called to the others, “here is a big snake—awfully big”. Dr. Merriam thought it might be a rattler and, telling us to stand still where we were, he came back and fired four shots into the creature before he finally killed him. He said it was the largest rattler he had ever seen. We were gone so long that Mr. Osmont and Mr. Furlong came back to show us the trail and to ask what we had killed. We then went to camp and got the tents up, etc. Miss Alexander soon went to hunt for fossils and immediately found a fine little jaw with teeth in it. Dr. Merriam got a vertebra and I got a rib or limb bone. In the afternoon, Mr. Osmont took Miss Alexander out and I went with Dr. Merriam and I found nothing, while he found two vertebrae. We all lay about the campfire that night while Dr. Merriam was brilliant with his stories.

July 1, Tuesday. We all went up to the Shastasaurus to see him blown out of the rock. He looked very good and Mr. Osmont and Mr. Furlong got to work drilling holes for the giant powder. It is slow work to do this, but by noon they fired off two fuses. Mr. Furlong was to be sent to sharpen the drills, but Dr. Merriam thought they had better see the effect the blasting had done before sending Mr. Furlong off. So Mr. Furlong, Miss Alexander and Dr. Merriam each drilled a hole and Mr. Osmont went to Brock's to look for the horses. Soon we saw them in the hollow below us and we felt quite grieved that Mr. Osmont had gone so far for nothing. We blasted three holes and found nothing was left of the Saurian, as Dr. Merriam said. I found four pavement teeth and Miss Alexander found one and a jaw. I also found a portion of the earliest Echinoderm. Mr. Osmont found a vertebra, so did Dr. Merriam, so did I! They said it was July 1st, so I told them it was my birthday and Mr. Osmont said he must do something and when he came back from Brock's he had a quarter of a deer to celebrate. We had a good dinner and sat and told stories until 9:30.

July 2, Wednesday. Mr. Osmont and Mr. Furlong went to find the trail to Cherrup Cherra and the rest of

us went on the high hill across the valley from them. We could hear each other all day. On the way home we came down a steep trail, probably made by a bear, as Dr. Merriam found a bunch of bear's hair. Mr. Furlong found one large vertebra, one median vertebra, several small ones, one Saurian tooth, one fish tooth, and ribs. Mr. Schaller found ribs and vertebrae belonging to two individuals, small teeth and single teeth. Miss Alexander found two or three vertebrae, a bunch of vertebrae, ribs and jaws, three portions of Shastasaurus without teeth, some with teeth, several loose bones. I found one tooth!

July 3, Thursday. It rained today so Mr. Osmont and Mr. Furlong went to a cove to look for Quaternary mammals and the rest of us remained in camp all the morning. In the afternoon we went to a new locality and Dr. Merriam soon found a Shastasaurian embedded in the rocks. It was a great find and made us very happy.

Mr. Furlong found one Saurian tooth and one fish tooth. Miss Alexander found some bones and staked out some others. I found three vertebrae, bones of an animal that Dr. Merriam did not know, and a fine little bone of this shape [*drawing of a horizontal keyhole-like shape*]. Mr. Schaller found some bones on the high, hard limestone, but I think they do not amount to anything.

July 4, Friday. Mr. Furlong and Dr. Merriam spent the day in taking out the Saurian. I found a large vertebra and some odd bones. Mr. Osmont found a Saurian jaw with two teeth, vertebra, and a small limb bone, also a large vertebra and fragments. Miss Alexander found three vertebrae and later a fine Shastasaurian, which made us very happy. Mr. Osmont went far over the hills and later in the day came back over Miss Alexander's specimen!! I found a vertebra and many fragments.

July 5, Saturday. Mr. Osmont went to Madison's for more supplies and Mr. Schaller left us this day to go to Redding to see some mines. He did not seem to have a very good time with us and I think was glad to leave. It was late when the rest of us got to collecting, on account of getting Mr. Osmont and Mr. Schaller off, and it was noon before we were through looking at Miss Alexander's specimen. From one to four I tramped up and down through the brush and over hot rocks, but they were the higher rocks and contained no fossils. Late in the afternoon Miss Alexander called to me to come up higher as she saw a bear moving the brush on the other side. So I went to the specimen that Dr. Merriam and Mr. Furlong were getting out, but Miss Alexander worked harder than ever and pretty soon called to us that she had another bone; and sure enough, she had another Shastasauria with three paddles!! Dr. Merriam found some duplicate material of Saurian remains. I did not find a thing all day because I stuck to the other members of the party after the bear episode.

July 6, Sunday. We were awakened this morning by two pistol shots which Dr. Merriam fired at a deer not more than 100 yards away. As he had just awakened and grasped his pistol and fired while still lying down and did not aim carefully, he missed the deer. After breakfast Mr. Furlong said he would go collecting and left at 10 o'clock. In the middle of the afternoon we saw him coming home at a pretty good pace. He had been cracking rock and thought he heard the rustle of the bushes; he paid no attention to it until finally he thought it might be a deer, and climbed on some rocks to look for it. There was a bear cub. He holloed at it and it trotted faster up the hill. He cast down his eyes casually and there was the largest cinnamon bear he had ever seen, sitting up on her haunches with her head above the bushes looking at him. She did not seem to be angry though she was willing to fight in a moment if her cub was disturbed. Eustace Furlong had left his collecting bag and hammer down the hill toward the bear. He thought a moment and then crawled down and got them and, moving slowly, started toward camp. He was excited enough when he reached us, however, and bemoaned the fact that he did not have a pistol. He begged Dr. Merri-

am to go back with him for he was sure Dr. Merriam could hit her. It was very tempting for Dr. Merriam. He is not a rash man and when I quietly mentioned the fact that his wife and child would miss him, he gave up. If he had had a rifle it would have been a different matter, but to go with a .38 calibre pistol to try to kill a cinnamon bear was too great a risk.

In the afternoon Mr. Osmont came back with provisions and letters. Dr. Merriam received one with the startling information that the Geological Survey from Washington with Mr. Diller , palaeontologist, and Mr. H. [spaces left purposefully] of Stanford were coming to Kelley's. So it was decided that we must get there first, and we went to bed that night with the understanding that Mr. Furlong was to go for Brock that night to have him move us in the morning. The main part of the specimens had to be gotten out and we decided to work on them in the morning.

July 7, Monday. All hands went up to collect and about 1 o'clock as we sat eating luncheon, Dr. Merriam saw a smoke in the direction of our camp. The men speculated about it for a while and then Mr. Osmont and Mr. Furlong went down in a run. When they got there they found the ladies' tent was entirely burned, with its contents. But I had hung all of our travelling dresses and coats on the little tree to which our tent had been fastened, and they were not burned. This will always be a mystery to me. Our beds and blankets were burned to a crisp, but fortunately the provision tent was not in the direct line of the fire. When we got into camp Mr. Osmont said he would not blame us if we cried. When I laughed he was disgusted with me. Miss Alexander lost her little camera with all the films, which was too bad as she had taken several camp pictures and a photograph of her Saurian in place on the rocks. Her grip was saved as the leather kept the contents from burning until the men got there. Our trouble was not yet over, for the fire was out of control. All hands went up hill to fight the fire. Dr. Merriam said he would not let that fire get away from us for a thousand dollars. He assigned a space for each of us to control a section and to be responsible for that. We had little to fight fire with; one or two ? sacks for a man or two, and the rest had such old limbs of trees as we could find in the timber with which to fight the tinder. The greatest danger was from the pine needles that lay on the declivities and swept up the hill like a flash time after time after we thought we had extinguished every spark. It was these flaming pine needles that kept us scurrying up hill at neck-breaking speed time and again until we were so tired we could barely move. By 7 o'clock Dr. Merriam thought the danger was over and we came down to get dinner. We were all tired enough to appreciate our dinner. Dr. Merriam slept with Mr. Osmont and Mr. Furlong and gave us his bed. He did not sleep very well for fear the fire would start out again in the night. Mr. Osmont placed a canvas across the front of the provision tent to give some privacy to the ladies. He did all he could to make us comfortable. It was whispered about camp that it was he who failed to entirely extinguish our breakfast fire; a wind blew the embers about and started our threatened forest fire.

July 8, Tuesday. Mr. Osmont was up at 5 o'clock today in order to get us off early. He went to get Mr. Brock to move us. Dr. Merriam and Mr. Furlong went to get the Saurians out and Miss Alexander and I watched for fire and looked for fossils on the burned places. At 11 o'clock Mr. Osmont came back and said Mr. Brock could not move us until Wednesday, so in the afternoon Dr. Merriam and Mr. Furlong took a vacation and later in the day Mr. Osmont and Miss Alexander went out for fossils. They walked a long distance and came back about dark, tired out. I took a root out from under our bed and we slept better that night.

July 9, Wednesday. We were up early this morning preparing to move camp. Dr. Merriam and Miss Alexander went on the hill back of the camp to take a photograph of it and the rest of us packed. About 10 o'clock Mr. Brock came and we started up the trail to Cherrup Chata [sic]. It was a steady climb for

one and one-half miles, but Mr. Brock proved an able guide, skillfully taking us through there quickly. Once on the downward slope Miss Alexander's horse became unmanageable, started down hill, and sat on his haunches. She walked from this point until we struck the trail from Madison's. From now on, we had delightful views of Squaw Creek with its precipitous banks or tall mountains as background, and the fine trees of Douglas Fir, pines, alders and oaks. We wound about Squaw Creek, sometimes on one side, sometimes on the other. The flora is very different from that at Bear Cove where we had pines and oaks with an occasional alder. The hills were almost impassable from the scrub oaks at that point. Here on Squaw Creek we had delightful views of the stream as it wound in and out among the mountain peaks. The stream is good for fishing here and the favorite haunt of many camping parties. There are more flowers than at Madison's and at Spring Camp. We stopped by a clear stream, Mr. Osmont set up the tent, and Miss Alexander and I gathered brakes for our bed and the rest of the party got dinner. It was 9 o'clock when we ate and 11 o'clock before we retired. Miss Alexander and Dr. Merriam were so interesting that we could not get away sooner. They told of travels abroad and incidents of their travel. Miss Alexander always knows something about the animals, plants, or customs of the natives in the countries in which she has traveled. She visited the sacred cave of the Hawaiians in the Hawaiian Isles, where all the chiefs were buried. Only three people knew the location of this cave, an old woman, her nephew and her son-in-law. They firmly believed that if they disclosed this location they would die at the end of the year. Mr. Alexander, Miss Alexander's father, bribed the nephew to show them this cave, and Mr. and Miss Alexander looked through it carefully in the hope of finding some relic. Miss Alexander crawled on her hands and knees in order to get to the back of the cave but was not rewarded with any new (?) find. Dr. Merriam and Miss Alexander also talked on literary subjects and became quite brilliant.

July 10, Thursday. Mr. Furlong went to Madison's, Mr. Osmont went after fossils and found none, and I had to stay in camp because I had no shoes to wear. Dr. Merriam and Miss Alexander stayed until 3:15 and then went after fossils but Mr. Osmont came home at 4:30, so I was not alone much of the day after all. He and I got dinner and just as it was ready Miss Alexander came home wet to the waist. She and Dr. Merriam had to wade the creek, the water was deceptive and she went in too far. Mr. Osmont built her a fire in the woods and she dried her clothes and put them on again. That night Pat roamed about and kept us all awake. Also Miss Alexander was cold, probably from her bath. Mr. Furlong came home late and left the fishing rods on the trail. As we were out of provisions we had rice, fried mush and onion salad (Dr. Merriam's contribution).

July 11, 1902. Mr. Furlong got up early, took the horse and went down the trail to get the fishing rods. Mr. Osmont got up early and went fishing. Miss Alexander and I got breakfast. Mr. Osmont caught no fish and was tired and all the rest of us were tired. After breakfast Miss Alexander rode down the trail and got Mr. Furlong's horse while the latter went off fossil hunting. They were gone all day and came back hungry and tired at 6 o'clock. Dr. Merriam went fishing and came back at 4:30 with 10 fine trout. Miss Alexander and I spent the morning in various camp duties. We worked as usual. A man and boy rode up to camp and asked me if there were any cattle about. I thought it was Mr. Kelley. Miss Alexander had seen him further down the trail and asked him to come and get us the next day. As Miss Alexander had just finished washing her hair up came Professor Diller and his party. Professor Diller asked her all sorts of leading questions as to the plans of our party and in fact knew our movements as well as we did. She gave as evasive answers as possible. He did not stay long. After lunch Miss Alexander and I read the Shastasaurus [*sic*] paper until Dr. Merriam came, when we got dinner. The boys came up tired and were rejoiced at the good cheer. Dr. Merriam had fallen in the brook and was wet up to his knees. He turned up his trousers to dry them and put on his slippers. Miss Alexander and I thought we would split our sides with

laughter. We all went to bed early that night for none of us slept well the night before.

July 12, 1902. Saturday. Early this morning we were packed up to have Mr. Kelley move us; at 9:30 we were on the road, seven horses, with Mr. Furlong and Mr. Osmont as footmen, Mr. Furlong with the powder. At 11:30 we were in camp; at 1:30 Mr. Osmont went fishing, and at 3:00 the rest of the party went fossil hunting on the ridge. It was hot work going up and down on the ridge. We found some bones of a small animal which Dr. Merriam thought was a Nothasaurus and Dr. Merriam and I collected many of these bones and hope they will be good for something to the Museum. Just as we were going home of course we found bone after bone, but finally got to camp. Mr. Osmont was there with 21 fish. Dr. Merriam would not clean them so Mr. Osmont had to do it and left us to get the dinner. Dr. Merriam insisted on having hot cakes. I finally told him I would make them if he would bake them. To this he readily agreed, for he had evidently never fried hot cakes squatting on his heels before a smoking campfire. We were so hungry that we finally ate our soup and let Dr. Merriam fry the hot cakes as we ate them. He never asked for hot cakes again. Mr. Osmont then fried the fish and we all ate a lot of them. After that we sat about the fire while Dr. Merriam entertained us with his stories.

July 13, Sunday. No further notes written up and evidently we were about to break camp to go back to Berkeley and had to ride horseback for some time to get back to civilization. Miss Alexander would have liked to stay longer and asked me if I would like to, but I felt I must be back to my duties at the University of California, and so we had to leave. On the way they gave me Dolly to ride as she was a safer animal for my inexperienced riding. She was a proud little creature and traveled very well if she could lead the pack but otherwise she lost all interest and strolled far behind. We had to catch the stage or train or something that would not wait for us. Miss Alexander had to go behind and whip Dolly to keep her going. I remember I was unexperienced that I would ride the trail, however steep or impassable unless Dr. Merriam would say, "You had better get off at this place, Miss Jones; it is steep". But the fun for the rest of the party came when I tried to get on the horse and she would start up before I was quite on. Even the sedate Dr. Merriam had to laugh at my awkward attempt to get fairly on.

At the station Miss Alexander and I ate a regular dinner while waiting for the train, and it was quite appetizing. When the train arrived, we could get no Pullman and had to face a lot of chair car people. We had forgotten to take off our old camping hats until we faced this dressed-up crowd. I shall never forget the wry face Miss Alexander made as she pulled off her old hat like a flash and darted into a seat to cover her confusion. We slept in the chair car seats that night, or tried to, for we missed the clear air and quietness of life in camp. Next morning at 16th Street Station we separated, she for Oakland and I for Berkeley.

It was my first experience in real camping and a very pleasant one. I think of it always as a wonderful trip and with warm regards for all members of the party.

(An extra page, written later, from memory)

AMANDA, MR. BROCK'S MOTHER AND THE MOTHER OF JOAQUIN MILLER'S DAUGHTER BY AMANDA

The first time I saw Amanda she was pleading with Dr. Merriam to tell her about her daughter. She had a most distressed look as she gazed at Dr. Merriam and said, "Is she dead? Is she dead? Is Joaquin Miller's daughter dead?" Dr. Merriam had read in the morning paper that Joaquin Miller's daughter had just died and had mentioned the fact to Mr. Brock who had quickly told his mother. After trying to comfort the worried woman by stating that he did not [sic] know which of Joaquin Miller's daughters had

died. Amanda turned to look at the rest of the party and her eyes fell on me. Her face lighted up and she exclaimed delightedly as she came forward, for I suppose my face told her of the great sympathy I felt for her in her distress. At any rate she took me into her heart that instant and was with me all day, watching me write my notes and talking as best she could. She repeated everything three times and by the third time I generally caught the drift of her meaning. She sat by my side silently as I wrote up my notes and said that was the way Joaquin Miller did. When I mocked a peculiar bird's notes, she cried in alarm that I should not do that or a snake would appear. I was quite impressed by the character of Amanda. She had honored our coming by putting on her new calico dress, fresh and clean. She lived in a wooden house, which is described in my notes. So she felt easy about her appearance and yet sat by my side so unobtrusively, happy in the company of a guest that could partially understand her, content to enjoy just being alive and not worrying as to time or as to having something to do, as we other Americans are apt to feel. She hoped they would not come for me that night so she could cook me some supper and let me sleep in Brock's bed. It was all as new to me as my life was to her. She showed me her house and her dried berries and materials out of which she made her Indian baskets and gave me samples of each and tried to make me comfortable and one of her own tribe. My notes describe the interior of her one-roomed frame house and what furniture, etc., she had in it. She really was a remarkable Indian woman who had early in life been stolen (at 10 or 12 years of age) by the Modoc Indians, rescued by U.S. soldiers led by her brother, saw most of her tribe killed in tribal wars, married two white men—Mr. Brock, by whom she had at least one son, and Joaquin Miller, by whom she had a daughter. So here she is living with her son and longing to see her daughter with a great longing in her mother heart that makes you see that affection that means all the nations of the earth are of one family and the heart of an Indian mother is as full of love-yearnings as that of a white woman.

I heard several years afterward that Amanda had died; poor, lonely Amanda, who was alone at night so much of the time and "cried all the time" when her son was off hunting and fishing. Dear, lonely Amanda, who said she would dream of Miss Alexander and myself that night, after we left her home.