Saurian Expedition Scrapbook 1905
A.M. Alexander Papers
Volume 1, Series 3
University of California Museum of Paleontology Archives

Annie Alexander's s scrapbook describing what she called the *Saurian Expedition of 1905* was probably left to the museum following her death. Now more than 110 years old it is one of UCMP's most prized archival treasures. Few people have access to the scrapbook, so in an effort to make this fascinating account of early paleontological field work accessible to a wider audience, the text was transcribed, the photographs scanned, and this pdf document was created.

Alexander's capitalization, hyphenation and spelling were left unchanged. The captions are as written by Alexander. The amount of body text on a page is the same as in the scrapbook, however, the ellipses at the ends and beginnings of text blocks are an editorial addition. Alexander pasted some images from other publications and a map into the first few pages of the scrapbook; these are not reproduced here. Editorial comments are italicized and in brackets.

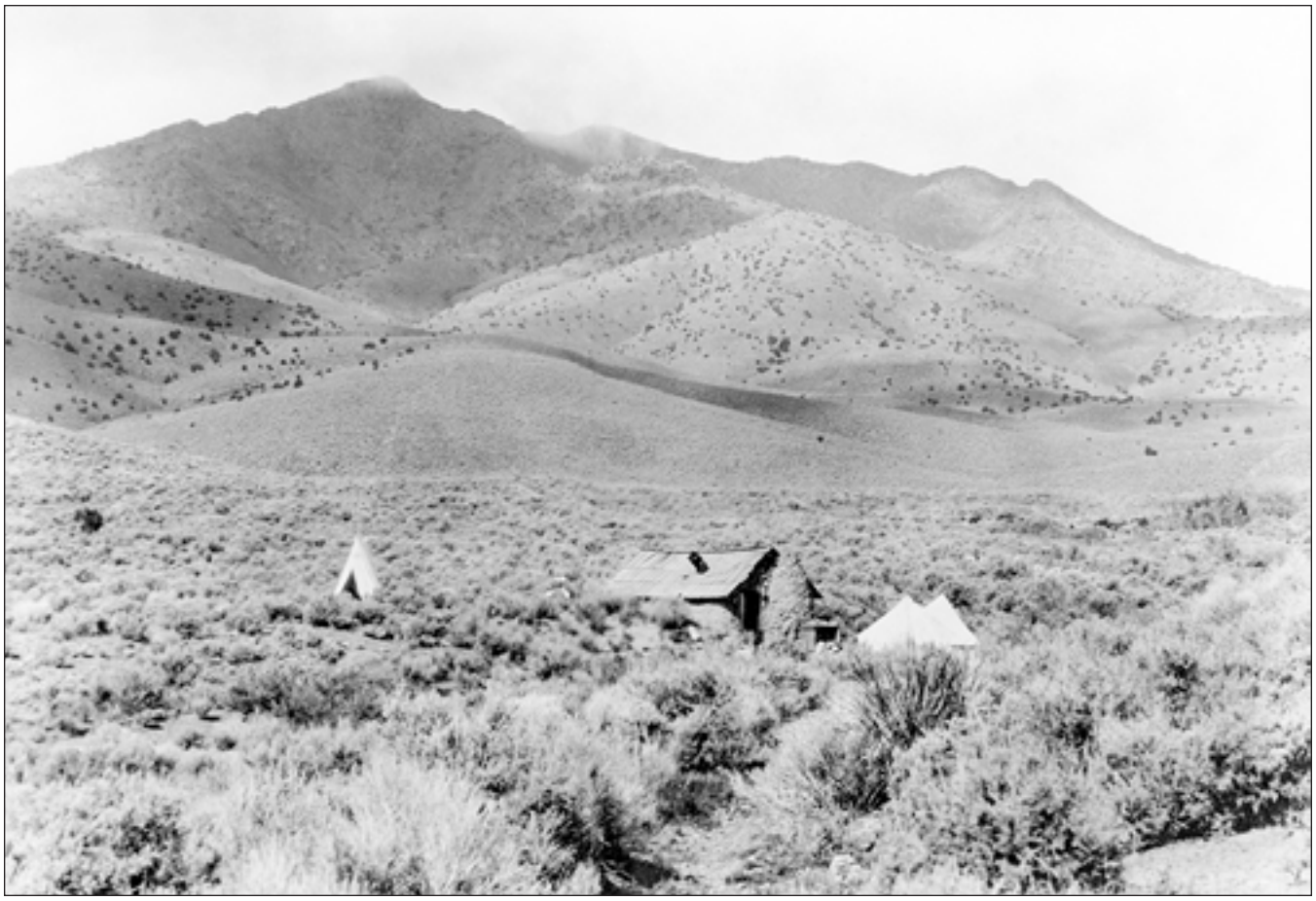
No doubt, most of the photographs were taken with Alexander's own camera, but there are a few that were taken by John C. Merriam; the negatives of these reside in UCMP's Large Format Negative Collection. The negatives are in better condition than the prints in the scrapbook, so when possible, the negatives were scanned for this document. All scanned photographs were improved to some degree in Adobe Photoshop by (1) dust and mold removal, (2) exposure and tonal range modifications, and (3) the addition of a black & white filter to remove color casts. The order in which the photographs appear closely follows that in the scrapbook.

— David K. Smith, UCMP staff retiree and volunteer

SAURIAN EXPEDITION OF 1905

The two months field work in the Humboldt Range of Mountains, Nevada, this Spring, was confined to a single outcrop of limestone, repeated by two or three faults and included in an area of less than two square miles. It forms part of the slope separating American Cañon from Troy Cañon and lies about 25 miles south of Star Peak, the highest point in the Humboldt Range. This fossiliferous area of limestone, whose horizon has been determined by Prof. Smith of Stanford as the upper part of the Middle Triassic, is probably the most southern to be found in the Range unless we include a few outcrops in Fischer Cañon about five miles still further south.

Second morning in camp. *[Note the snow on the hills in the background. The tent in the right-hand photo was shared by Annie and Edna and was probably used as a changing room; Annie talks about sleeping under the stars on the last page of this document. The men presumably shared the large tent near the front of the cabin.]*



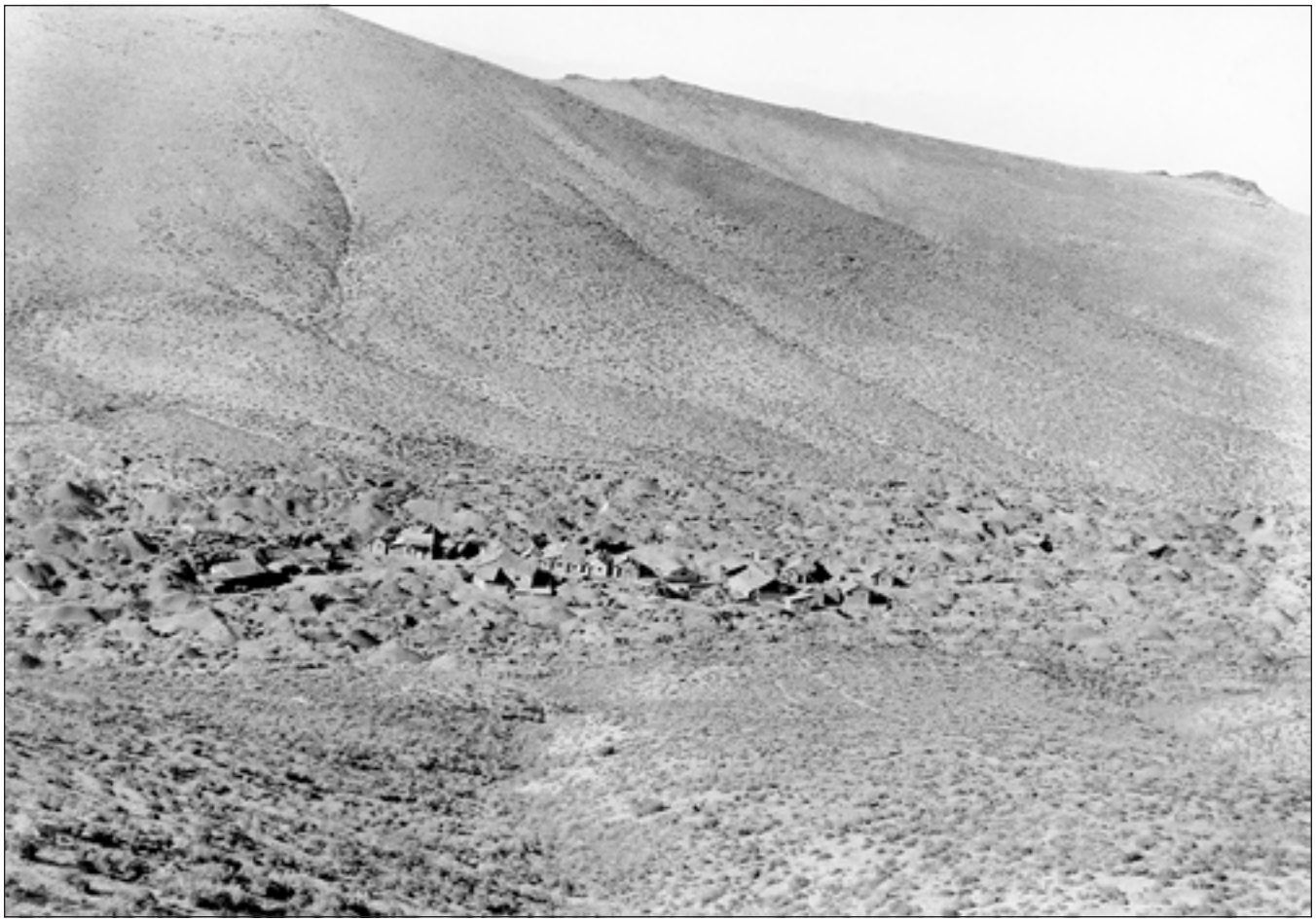
"We chose the site of a deserted miner's cabin for our camping ground." *[Note how the men's and women's tents were situated on opposite sides of the cabin to provide some degree of privacy. The snow on the hills had melted by the time this photo was taken. Although it is not obvious in any of the photos taken around the cabin, a small, spring-fed creek flows just this side of the cabin and men's tent, running from the back right to the lower left of the photo.]*

South wall of American Cañon. *[The two hills at the left are what Annie refers to as Smith's Ridge. Today, the higher of the*
line of Saurian Hill forward and down to the canyon and you'll see a prominent rock outcrop near the base; the cabin that A

e two is called Fossil Hill. Saurian Hill is the third peak from the left—the pointy one just right of center. Follow the ridge-Annie and the Berkeley crew called home during their stay here is hidden just behind the slope in front of that outcrop.]

The south side of this cañon is composed mainly of Upper Triassic limestone in which no fossil remains are preserved. It forms a massive pile of rock hemming in the cañon at its upper end with a precipitous wall. Several deep cuts on its surface show a succession of strata whose aggregate depth is probably several hundred feet. The possibility that the Middle Triassic might be found in contact with it led to several visits to the cañon with the result that three outcrops were found near the stream bed. They proved poor hunting ground although signs of bone invited careful search. One specimen showing remarkable weathering was discovered. It consisted of a portion of a lower jaw flattened out, the rami turned away from each other, each supporting a row of flat teeth well exposed. The finest needle could not have …

Branch valley in Fischer Cañon.



Mining camp North Fork American Cañon. *[This photograph was taken from the same ridge as the panorama on pages 4 and 5. The panorama is the view to the south and this is the view to the north.]*

… removed the lime particles more skilfully *[sic]* than had nature.

Some acquaintance with the various outcrops of limestone along the eastern slope of the Humboldt Range had already been made by Mr. Osmont *[Vance Craigmiles Osmont (1874–1943)]* in the Spring of 1902, and by Mr. Furlong and Mr. Evans *[Herbert McLean Evans (1882–1971)]* in 1904, but their work was confined almost entirely to the cañons in the neighborhood of Star Peak, - Cottonwood, Star, Unionville, and Coyote. Three or four days only were spent in American Cañon, and the real extent of the saurian beds was not known. In planning our expedition into the region this Spring, we proposed to cover not only the cañons already mentioned, but to cross the country S.E. for a distance of about eighty miles to a point called New Pass. It was here that saurian remains consisting of a series of five vertebrae were …

It is said that several million dollars in gold have been taken from the gravel deposits in N. Fork.

… first obtained by the U.S. Survey as early as 1868. Three or four vertebrae were also picked up by the survey party in Star Cañon, Humboldt Mtns. but until 1902 no further search had been made for saurian material. That our two months' field work this year which planned to cover so much ground was limited almost entirely to the outcrops in American Cañon, goes to demonstrate the fact that saurians were not only plentiful in Middle Triassic times but that the limestone deposits in Nevada in which their remains occur, promise an enormous field for future investigation.

The first division of our party consisting of Miss Wemple, Mr. Furlong, and myself, reached American Cañon on the 8th of May. We had quitted the Railroad at Lovelocks *[the "s" was dropped around 1912]* the day before but a late start …

Saurian Hill from Smith's Ridge.

… and a heavy load obliged us to camp over night at Spring Valley, a mining station on the east side of the mountains. By a more direct road the distance from Lovelocks is about 38 miles. We chose the site of a deserted miner's cabin for our camping ground where fine water was to be had close at hand. The cabin proved a capital storage place for our provisions. We turned the wide bench on either side of the interior, - evidently sleeping bunks -, into sideboards and nearly all of our cooking was done in the big open fireplace though it did smoke abominably at times.

The season was early in the mountains for snow covered all the higher summits. We enjoyed a wonderful prospect from Saurian Hill. Across the valley below us rose a chain of mountains called the East Range, running north and south, parallel …

Humboldt Range.

Buffalo Sink and the East Range as seen from camp.

… to the Humboldt Mts. Our eyes could travel its length for eighty miles or more. Though not as high as the Range which we were in its contour was striking, Cinnabar Mt. across from our cañon, and Table Mt. further south being especially prominent. It too, has its coating of snow, and we could even see beyond, the loftier peaks of the second range.

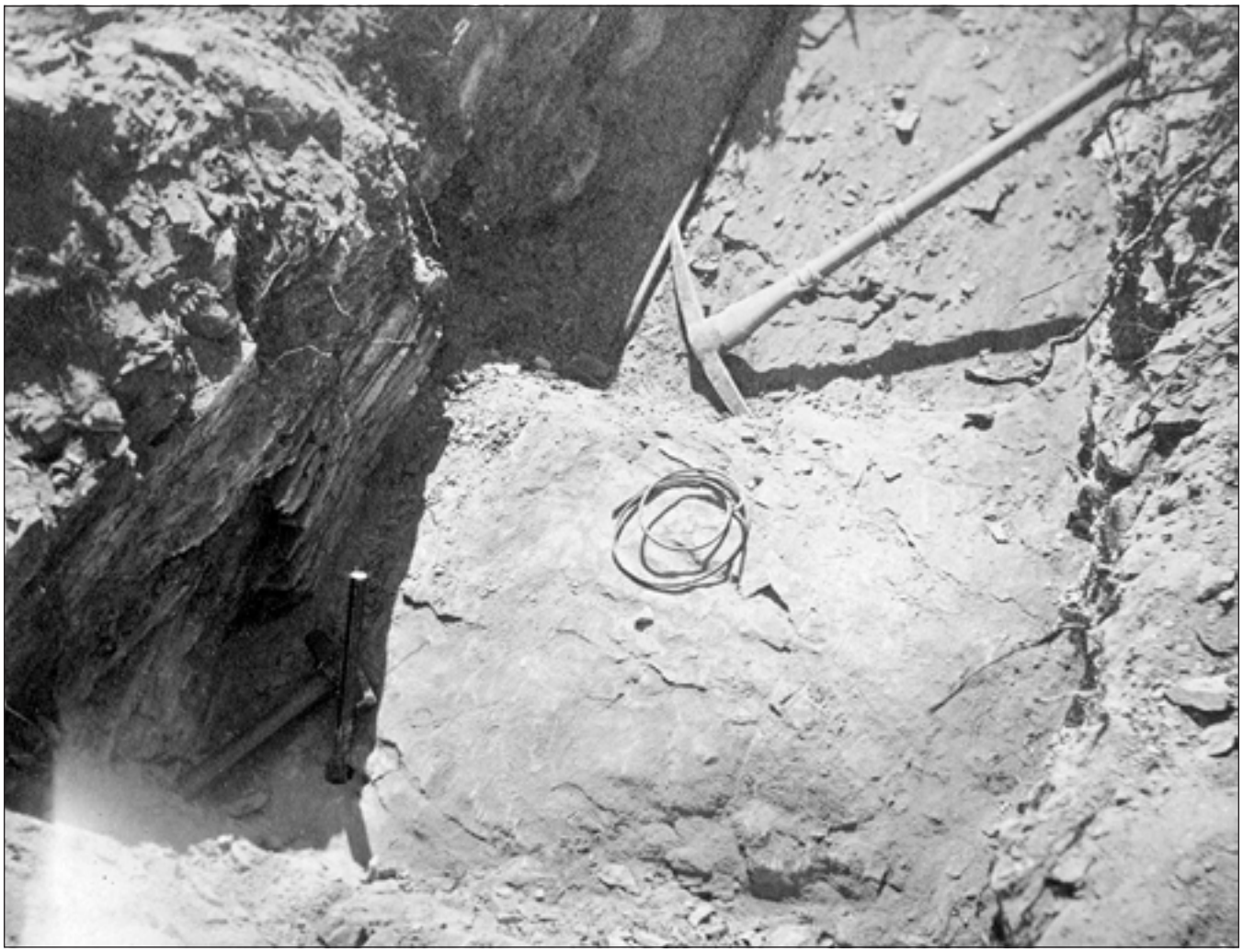
Although we shivered the first two or three weeks from the keen wind and occasional sleet, the unsettled weather brought great variety in light and shadow in the landscape about us. Sometimes half a dozen distinct thunder showers would gather and sweep across the valley of Buffalo Sink below us. There was a perpetual scurry of clouds from the northwest. They left their snow on the higher elevations that looked truly Alpine as the sun touched them. Star Peak, the …

South east *[sic]* slope of Saurian Hill.

… proudest mountain top about us, seemed a mark for the elements. All this we witnessed while keeping an eye open for bone, taking in large draughts of the bracing air, our warm jerseys buttoned up to our necks.

Our first afternoon was not barren of good results although we went to the farthest confines of the limestone area for our hunting. Later we found bone much nearer home. It was surprising how new tracts of limestone would open up when our survey seemed nearly complete. First it was the east slope of Saurian Hill that we diligently searched; then the north slope; then Smith's Ridge, lying about a mile northeast of Saurian Hill, some 700 feet lower in elevation; later still the southwest slope, ending up our triumphal march with a second visit to Smith's Ridge.

"—Two loose blocks of tail bones were the clues to the first Saurian."



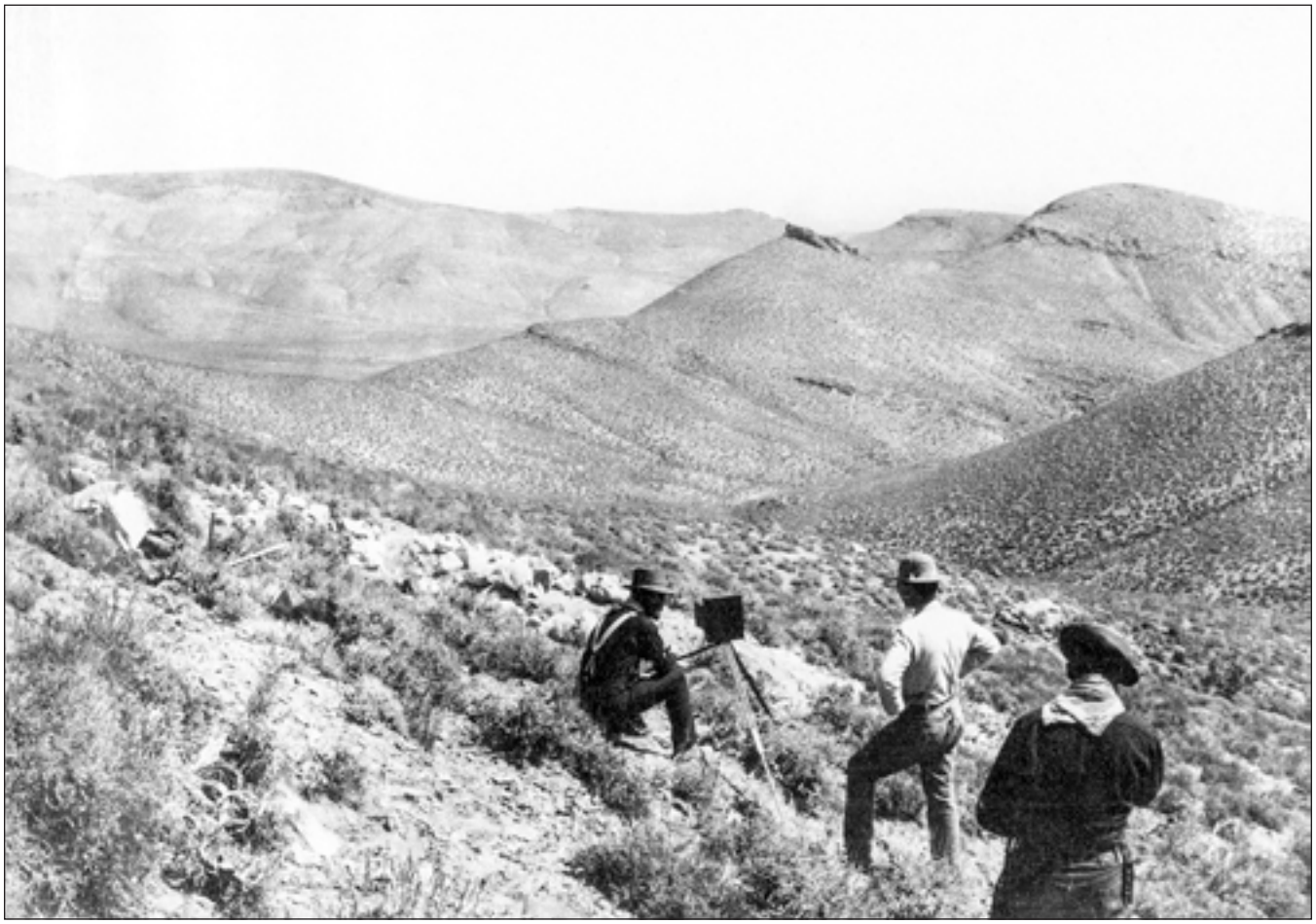
[Holes for placing dynamite were cut into the limestone using a hammer and chisel. What looks like a coil of rope (above) may be a length of fuse.]

We were expecting the remainder of our party on the 12th of the month; Dr. Merriam of the University of California, who could spare us but a week and a half of his time; Mr. Goddard who was to leave us at the end of May to canoe on Lake Independence [most likely Independence Lake in the Sierra Nevada, west of State Route 89, about halfway between Truckee and Sierraville]; and Mr. Boynton who was to stay with us to the bitter end. This gave us three days in which to make a collection for our Professor to inspect. In that time two specimens were located on the limestone hill, fitly called Saurian Hill thereafter. Two loose blocks of tail bones were the clues to the first Saurian. The second which Miss Wemple found was lying full length in the solid ledge, only a portion of his shoulder exposed to the light of day. "The Sea shall give up its Dead" saith the Scriptures but the Nevada seas of Triassic times …

"The Sea shall give up its Dead."

… defied the prophecy pretty thoroughly when it sealed up its Dead in its limestone floor. Think what countless and diverse races have walked or crawled or swum on the earth and become extinct since that remote time! It is a thrilling thought to the fossil hunter that he is privileged to reach back in the world's history and uncover some of its ancient pages. Our particular privilege was to unearth swimming reptiles of some ten million years' standing, no light task considering the grip in which they were held. Pick and shovel were the implements used and Mr. Furlong wielded them manfully but he was heard to exclaim more than once, "The men cannot come too soon!"

The evening of the 12th arrived at last and with it our friends to reinforce us. Dinner was ready to be served when the wagon hove into sight. A few minutes …



In which the Saurian's remains are photographed by several members of the party. *[That's Merriam crouching by the camera. The photograph he's taking is probably the one on the previous page.]*


Dr. J. C. Merriam.

… later Malcolm Goddard had sprung to the ground and was approaching us with the strides of a young buccaneer, his sombrero on one side of his head and a pistol in his belt. He proceeded very shortly to roll up his sleeves and offer to fry flap-jacks for us and as we were nothing loth, he was soon astride a cracker box with all necessary implements about him. He had drawn on a magnificent pair of fringed buckskin gloves and it was clearly to be seen he was a master at the art. I remember saying to my friend Edna Wemple as the smoking hot flap-jacks piled the plate, "Malcolm Goddard is a good camper; he pitches right into work." In the days that came and went, however, so many traps were set for rats and mice, gophers, and prairie dogs, that in his morning and evening round Malcolm Goddard always fetched up a little behind time for …

Badger caught in one of Mr. Goddard's traps.

Mr. Goddard waiting his turn.

… meals. But it was his own fault that his soup got cold, was it not?

Now meantime, where were Dr. Merriam and Mr. Boynton? As they were on horseback they should have been the first to reach camp. We were truly alarmed when told that when seen last they were half a mile ahead of the wagon. I suggested they might be on their way to Fischer Cañon or worse still, lost in some lonely defile of the mountain. No sooner was this melancholy thought spoken than Mr. Furlong had flung himself on one of the horses bare back, nor could I persuade him by any argument to stop to put on a saddle; he only smiled his enigmatical smile and went jogging down the road. Thus is true devotion ever unmindful of herself! But our lost riders did not keep us long in suspense; we were soon hearing a recital of their adventures as they shared our …

"—he only smiled his enigmatical smile"

… evening meal.

It appears they were waylaid on the road. Whether it was faintness from the long ride or genuine thirst that caused them to draw up before the door of the singular couple, Mr. and Mrs. Castle, living in a deserted Chinese barn, I fail to remember, but the kind offer of tea and cake and other refreshments was not rejected. We are charitable enough to think it was not so much the bountiful repast spread for our travelers that detained them so long, spoiling their appetite for our good victuals, but an elaborate exposition of a wonderful mining claim on the hill that Beauty's husband the Beast discovered himself and was working, for we afterwards heard the long mining story from the Beast's own lips. Miss Wemple and I were suspicious of Mr. Castle.

The "deserted Chinese barn"

We agreed between ourselves that he was an outcast, condemned for some villainy to spend his days in the outer parts of the earth, as the North Fork for instance; and when you come to think of it how could a good record be expected of a man with a blue and brown eye!

The next few days kept us busy as ants over Miss Wemple's specimen. Block after block of bone was taken out of the big ditch being dug, and ranged around the edge till tail and head of the monster met; that is, presumably so, for this particular Saurian was too thoroughly imbedded in the rock to give us a hint as to his separate important members. He was long enough however to include everything.

Little by little the blocks were marked and wrapped and packed down to camp on the backs of our horses. This momen- …

"—The blocks were marked and wrapped and packed down to camp on the backs of our horses." *[A photograph with the caption "—tail and head of the monster met" appeared with these two photographs, but is essentially the same as the one on page 16, and so was excluded.]*

… tous event in the history of the skeleton had hardly transpired when the resurrection call aroused another Saurian from his long sleep. After a course in purgatory in which he will be divested of his limestone encasement he ought to shine as one of the foremost lights in the new museum at Berkeley, for he was a saurian of truly lordly proportions. He was found by Mr. Furlong some forty yards above Miss Wemple's specimen; a few weathered ribs in the ledge were the only indications. For two days I watched with fascinated eyes the work of excavation. It went fast as the skeleton fortunately lay near the surface. Beginning with what were evidently the shoulders of the animal one block after another of rock was lifted out showing by the round contour of bone through their center a continuous chain of vertebrae. This was followed …

"For two days I watched with fascinated eyes the work of excavation."

"—he was a saurian of truly lordly proportions." *[Note how the blocks were marked and labeled ("L" for lumbar) for later reconstruction in the lab.]*

… eagerly until it was plain that the pelvic arch had been reached, as rock containing bone, probably limb bones, spread out on either side. These were all carefully removed and put in a cleared space, one against the other just as they lay in the ledge. You can imagine what a big mix-up there would be if rocks containing bone were thrown helter skelter in a pile! We had now reached the caudal series or tail. The vertebrae were large, entitling the animal to an added length of 16 to 20 feet but the ledge was surely thinning out, and with the ledge turning to earth the bone in it would almost as quickly decay, being only a trifle harder than the limestone itself. Yet the tail with a little limestone attached held its own for about six or eight feet. The last in the series was in perfect condition and at least three inches in diameter. It is hard to account …

He measured twenty five feet in length. *[Eustace Furlong with excavated blocks containing ichthyosaur bones.]*

View of the upper half of the Saurian.

… for the sudden stop; there is this possibility: the tail might have been upturned at this particular point by the long snout of a brother Ichthyosaur rooting about for ammonites, thus separating for all time the part from the whole; or it might have been nipped off in babyhood by an unnatural mother, but the problem is beyond our solving. The Saurian was well landed now except for the head, and this, too good to be true though it may seem, was found just where it should have been found—a little in advance of the shoulders. How much more dignified for this splendid swimmer of Nevada seas to support his own head instead of a plaster one on the day when he is set up in state in the new museum! As to the gain in value scientifically, that is not for us to estimate. The specimen was measured and …

The North Slope of Saurian Hill where four specimens were located. *[Two or three members of the crew can be seen in a quarry several feet to the left of the lone juniper.]*

… found to be twenty-five feet long. After the locality and museum numbers had been inscribed on all the blocks belonging to it, the several divisions of the skeleton were marked in green paint, H, D, L, and C, according to the parts they represented as Head, Dorsal, Lumbar, and Caudal regions. Then the work of transporting it to camp began.

Meantime Dr. Merriam and Mr. Boynton were making finds on the North Slope, exposed to a sharp wind from the snows of Star Peak that enveloped them continually in a cloud of dust from their own diggings. This wind increased as the day advanced, 'cutting to the vitals as a wolf springs for a man's throat", and driving at last the most determined fossil digger from the field.

The slope separating American Cañon from Troy Cañon is narrowest just above …

[In this view, the quarry is just this side of the juniper. The head and shoulders of one figure can be seen above the quarry lip.]

Industrious fossil hunters.

… the limestone outcrop; here however it spreads abruptly to form the flanks of Saurian Hill. The main ridge which lifts the hill some fifty feet above the point where the limestone begins, then breaks down, but the slope is continued to the flat chiefly by a prominent ridge from the north flank called Smith's Ridge, which forms the south wall of American Cañon near its mouth. The interval between this ridge and the mouth of Troy Cañon is cut up into minor hillocks and gulches. We could look down upon it all from Saurian Hill and as far as we could tell the formation seemed to be of the hard, gray limestone. Nevertheless we speculated considerably about it. The hill on which we were working was proving such a wonderful burial ground that it held us like a magnet. Dr. Merriam how- …

Smith's Ridge.

… ever had had his eye cocked on Smith's Ridge ever since he arrived, and on pretext of looking for caves in the limestone cliffs that topped it, he left Mr. Boynton facing the cold blast of the North Slope like a Norway pine, and was lost to us for nearly a day. His report that evening was very interesting. He had made the entire circuit of the two hills composing the ridge, and discovered that their S.W. slopes were very fossiliferous. Indications were abundant that Prof. Smith had already been on the ground and not on the hill above as we had supposed. From the dip of the ledges it was evident that the two exposures had been separated by faulting and from the main outcrop on Saurian Hill in the same manner. In this view Dr. Merriam coincides with Prof. Smith. The U.S. Geological Survey did …

North and south view of Smith's Ridge.

… not take the faulting into consideration so computed the depth of the limestone to be several thousand feet, whereas the actual thickness is not more than forty or fifty feet. To give us a start on the new hunting ground Dr. Merriam located a specimen on the west hill. As the ledge in which it occurred dipped at angle [sic] of about 45º and as the rock overlying it became harder at every step in the excavation, is it any wonder that the fossil diggers sighed—"O, for a derrick and a gang of twenty men!" We did try to get a Chinaman at the North Fork but all that were left were toothless old men, fitter to be interred than for the work of disinterring.

I must tell about a rather remarkable hailstorm we had early in our trip. We were returning from a horseback ride to Fischer Cañon; Miss Wemple and Mr. Boynton …

Eating lunch over Dr. Merriam's specimen. *[From left, Eustace, Annie and Edna.]*

Juniper trees of the desert.

… had already reached camp and Mr. Goddard and I were on the last slope when we noticed a sudden whitening of one of the lower ridges to the north. It seemed purely local at first as if the whole energy of the storm were exhausting itself on the single ridge, but soon it became apparent that it was traveling rapidly in our direction like a tornado turning everything white before it, or a sudden cloudburst of snow. As it approached it resembled smoke or fog creeping along the ground, with a peculiar whirring sound such as I never heard before—and I doubt not that the hailstones forthwith driven at us could have been but slightly smaller than those of the Fourth Plague of Egypt. In the midst of it all a horse suddenly shot out of camp. The fiery darts of the Devil himself could not have urged him faster over the ground. He swerved on reaching the slope being still pursued, and seeing us apparently in a place of safety—for mine was a very philosophical steed—came down upon us like an avalanche! Never shall I forget that spectacle of Terror personified in poor Buck, for it was no other horse than he—and only by dint of clapping my heels into my animal did I escape utter destruction. I feel that Buck's character deserves some analysis but it is hard to bring an unprejudiced mind to the effort. We might say in explanation of his actions that his brain was unbalanced by an overpowering sense of impending calamity that clothed at times even the commonest objects in threatening, diabolical shapes. Inasmuch as his mental suffering must have been terrible in the extreme, we can pity him, but a horse who without any provocation …

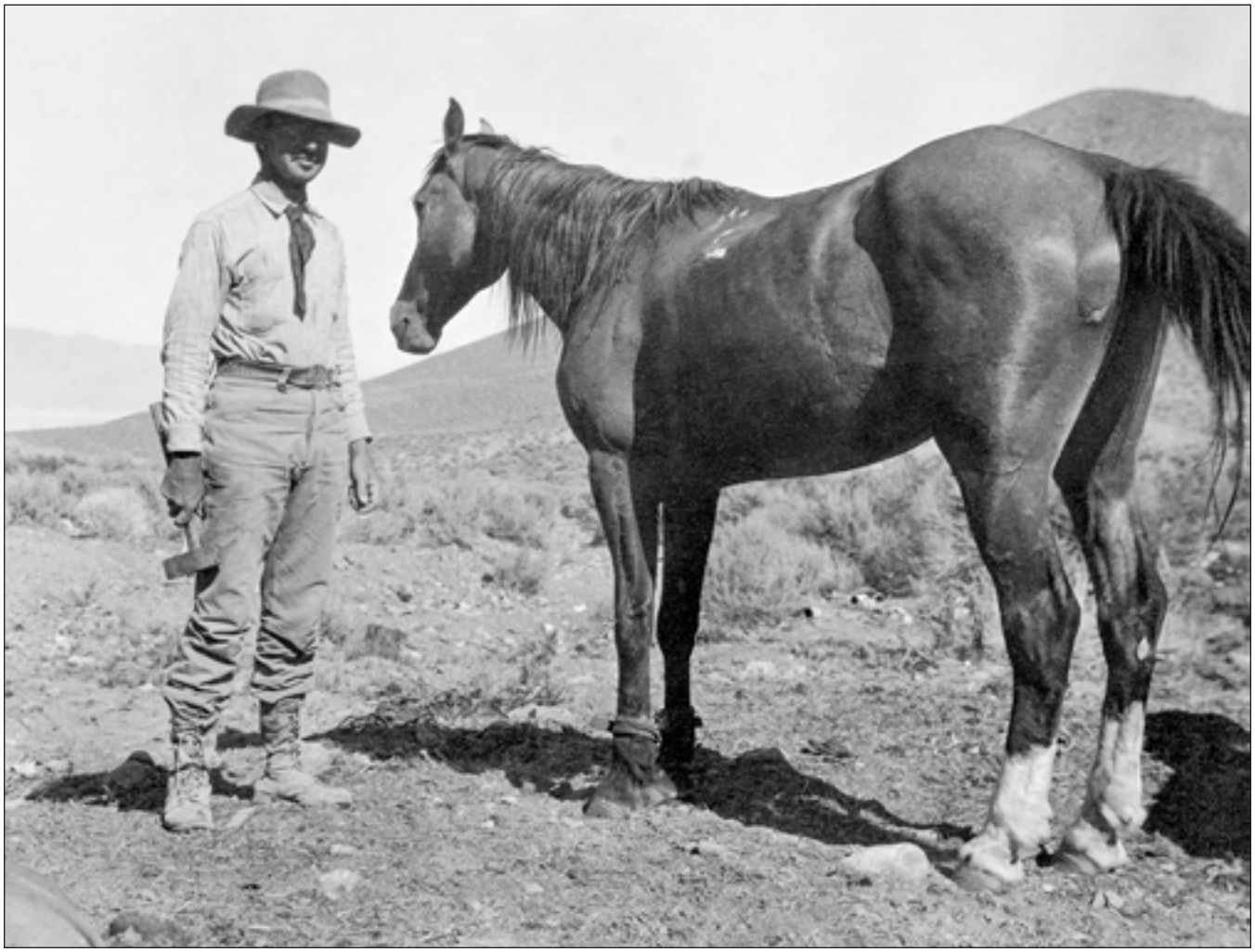
… flings his rider among the sharp rocks and essays the same trick with another on a steep side hill, and moreover runs away from camp on an average of twice a day, is, to speak very mildly, a trying creature to have about. It did not take Buck any time when once his long legs were doubled under him in flight, to vanish over the ridge into Troy Cañon or become a mere yellow speck on the borax deposits of Buffalo Sink. He was always brought back to the fold whatever it might cost of time and patience. His demeanor on his return was gentle and subdued, not even a horse expert could have devined [sic] his real nature. Like the Prodigal Son he was received with open arms by his master, Mr. Furlong, and fed on the fat of the land. Perhaps if Mr. Furlong, who had purchased Buck outright soon after we were settled in the Cañon, had not dis- …

"It did not take Buck any time to vanish over the ridge into Troy Cañon

or become a mere yellow speck on the borax deposits of Buffalo Sink."

… coursed so frequently on his many fine qualities, the latter's singular behavior might not have affected us as it did. Revile him as we would his master was his champion to the last and stuck to it that Buck had his good points and ought to bring fifty dollars.

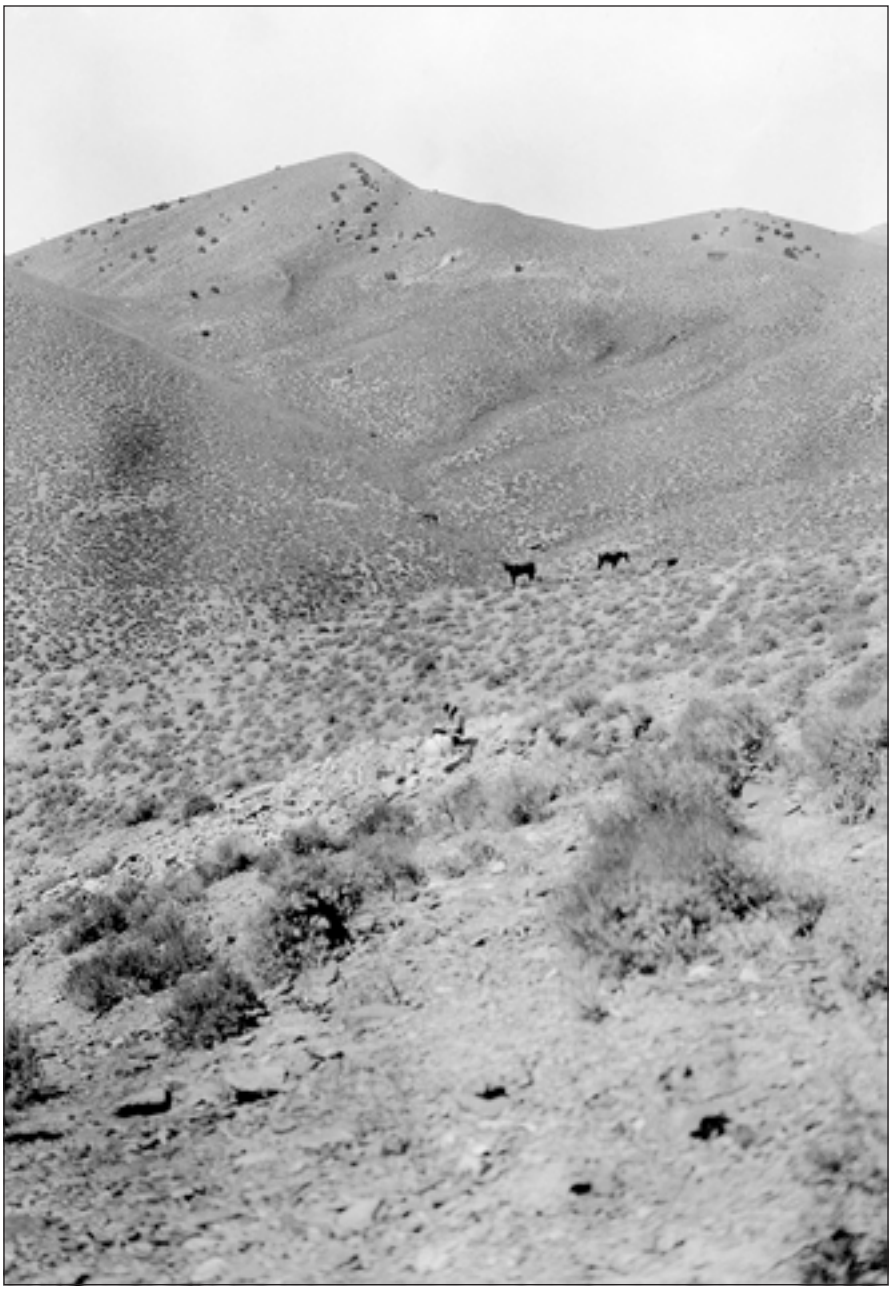
But to return to work, and hard work. Several specimens were the result of Dr. Merriam's discovery of the fossiliferous character of Smith's Ridge. When these were piling up back of the cabin and even as we were dreaming of new fields to conquer a ramble over the S.W. slope of Saurian Hill put a stop to all such schemes. I went so far as to spend a good part of a Sunday cleaning out our cabin preparatory to another week's stay. Another week! It was well we did not know that American Cañon was to become …



"His demeanor on his return was gentle and subdued."

"The excavations took the form of tunnels."

… our permanent home as long as we were in the country. Owing to the sharp dip of the ledge on the S.W. slope the excavations took the form of tunnels, the men disappearing from the light of day to come to the surface only when there were dirt and rocks to shovel out or more seldom to place a block of bone alongside its fellow representing the hidden treasure they were seeking. In several instances not all of the hidden treasure was gotten out; we knew it would keep and thought it better to get out all we could of a dozen specimens than to spend the balance of our stay extracting one or two. Of the nine saurians obtained from this slope though very incomplete, all showed important bone. There were three heads among them. One Miss Wemple found at the south extremity included also …



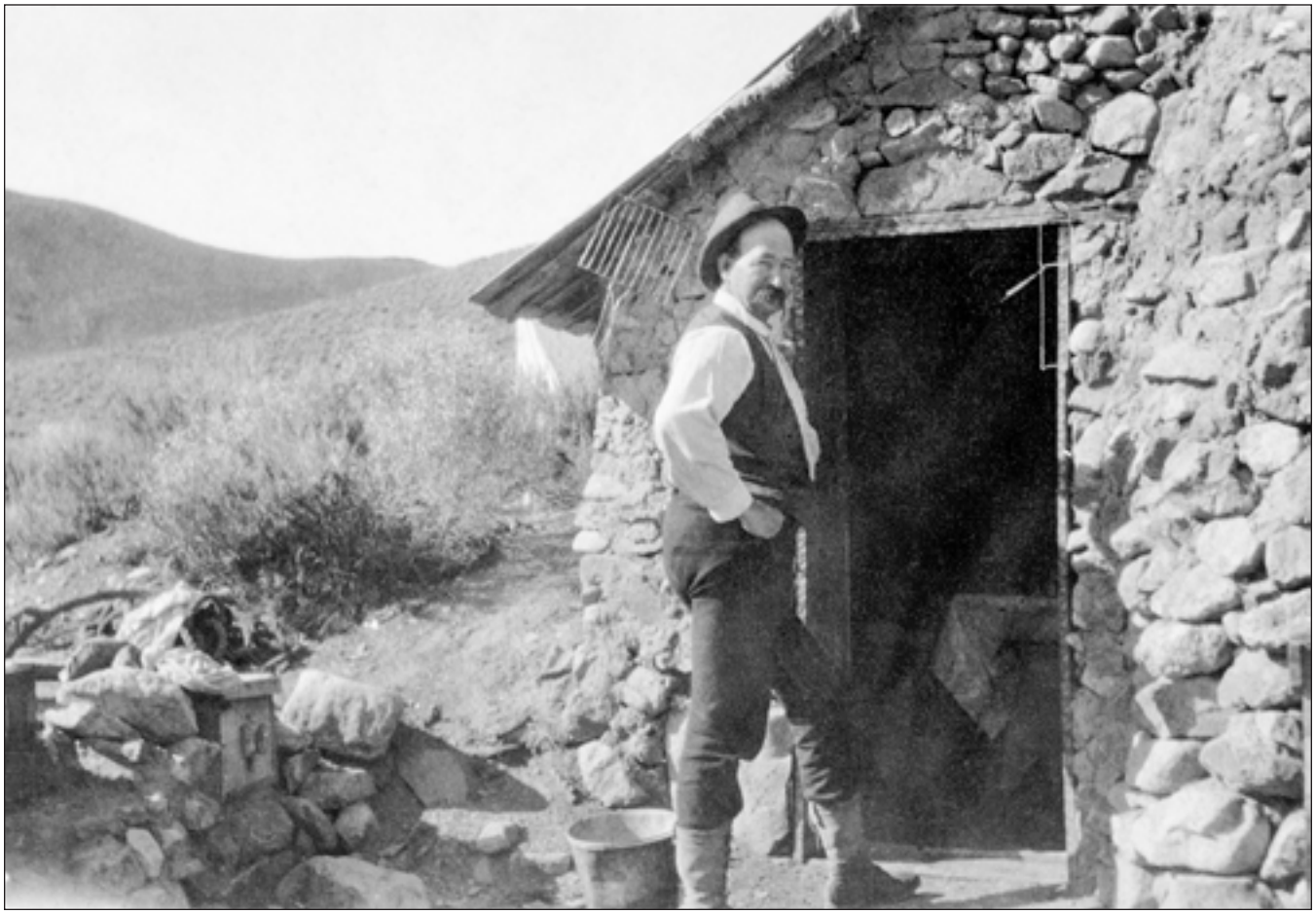
[This quarry would appear to be the "Gorge" on the southwest slope of Smith's Ridge (Fossil Hill) that Annie describes later on.]

… the anterior arch. The head as far as we could judge was entire. In removing the snout the rock fell off it as if the latter had been in a mold. A head Mr. Furlong found, though in poor condition, was carefully marked and wrapped as it was one of very few specimens collected showing flat teeth and probably representing a new form.

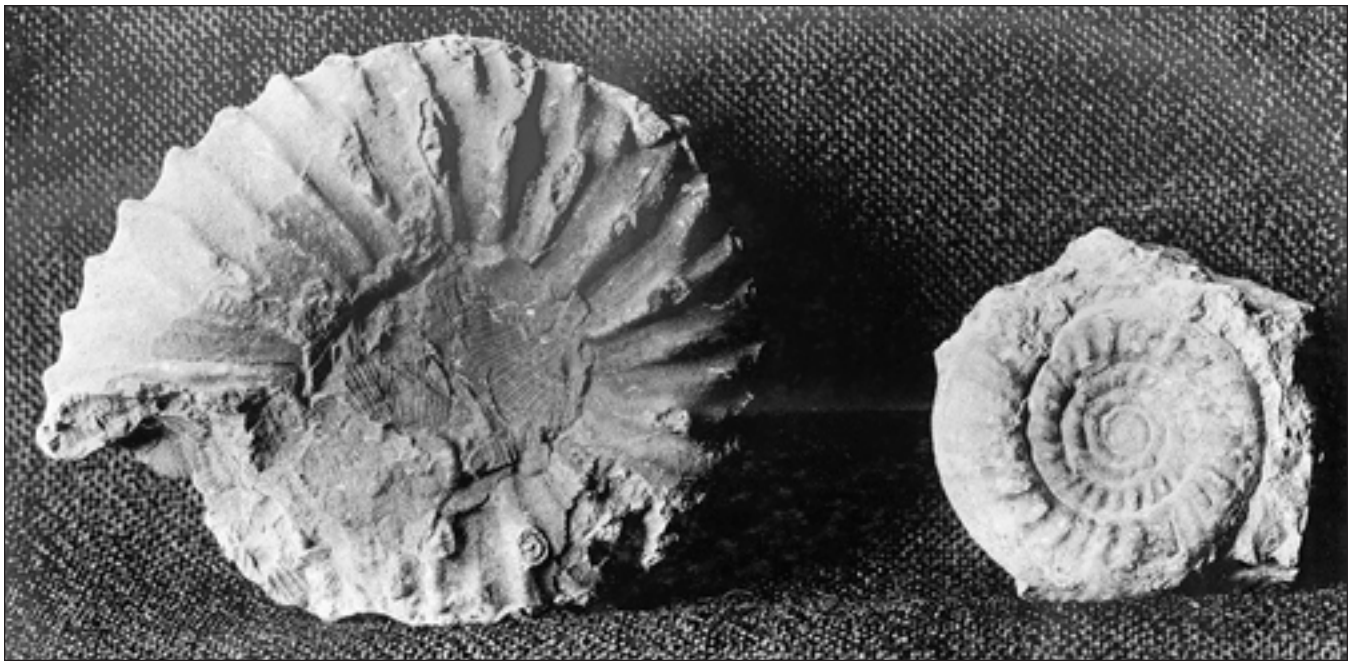
We were still at work on the S.W. slope when Prof. Smith of Stanford joined us for a week's ammonite-hunt. Though ammonites abounded in the rocks about us we had not been particularly interested in making a collection. Mr. Boynton, however, always on the lookout for something out of the ordinary, had in his assortment of relics or curios an ammonite as big and as round and as flat as a plate. I know he prized it immensely for I remem- …

"—Prof. Smith of Stanford joined us for a week's ammonite hunt."

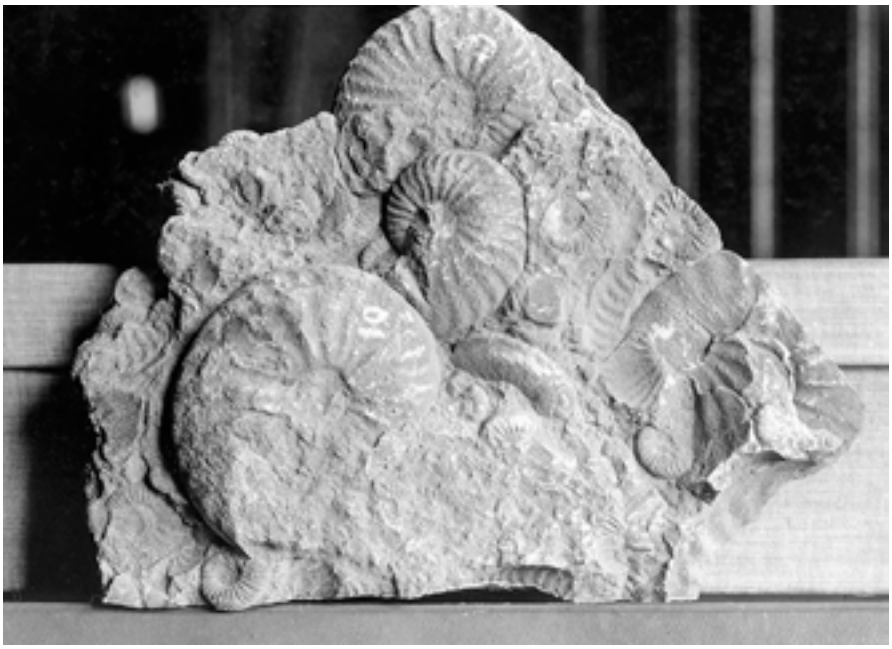
… her his holding it up in exultation several times and gloating over it, but I could not resist the temptation to ask him to show it to Prof. Smith. It was cruel of course, but everything for the cause of science! Now Prof. Smith is a very enthusiastic man. He claims that Heaven has no attractions for him unless there are ammonites there and be they stout or thin, spiney [sic] or smooth, he handles them alike lovingly and searches for them untiringly. I cannot say how many thousand he already has stored away in some safe place at the Stanford University but judging from the bags full he took with him when he bade us adieu, I fancy it is no small store. To show a man like this his treasure Mr. Boynton felt was equivalent to handing it right over. We were all waiting to see what the profess- …



"He claims that Heaven has no attractions for him unless there are ammonites there."



… or would say, and I guess pride in exhibiting so unusual a specimen finally prevailed for out it came. If there had been any doubt in our minds as to who would be the ultimate owner it vanished when Prof. Smith's eyes fell on the ammonite. "A Gymnites, a Gymnites!" he exclaimed. "Never did I expect to see one in the flesh," and then he took it close to the light turning it over and over, and round and round, he told us all about it; how it had been known only from Switzerland and India, and what a magnificent specimen this one was, and how he wished it could have been found six months earlier, before his book had been published. You would have thought Mr. Boynton's heart would have melted on the spot and he would gladly have offered up the sacrifice, but no—its value was enhanced a hundred fold to him; he would …



"I cannot say how many thousand he already has stored away in some safe place at the Stanford University."

… keep it under his pillow at night so Prof. Smith wouldn't steal it. So the matter hung fire several days till finally it was settled by a game of whist—Prof. Smith winning. Even then it came hard to yield it up and the ceremony was prolonged by the mischievous Mr. Boynton. He consoled himself by saying he would look for another one but whether he was again as fortunate I cannot say. When Prof. Smith took his departure the Gymnites traveled with him, buried in the centre of his sleeping bag. He took the extra precaution to wrap it first in his night shirt and then in a pair of pantaloons and I trust that it reached the railroad safely.

Besides his odds and ends of vertebrae and ammonites Mr. Boynton had an array of fruit fars [sic] filled with snakes …

En route for Saurian Hill

Camp views again *[The small tent in the foreground of the right-hand photograph is probably Professor Smith's.]*

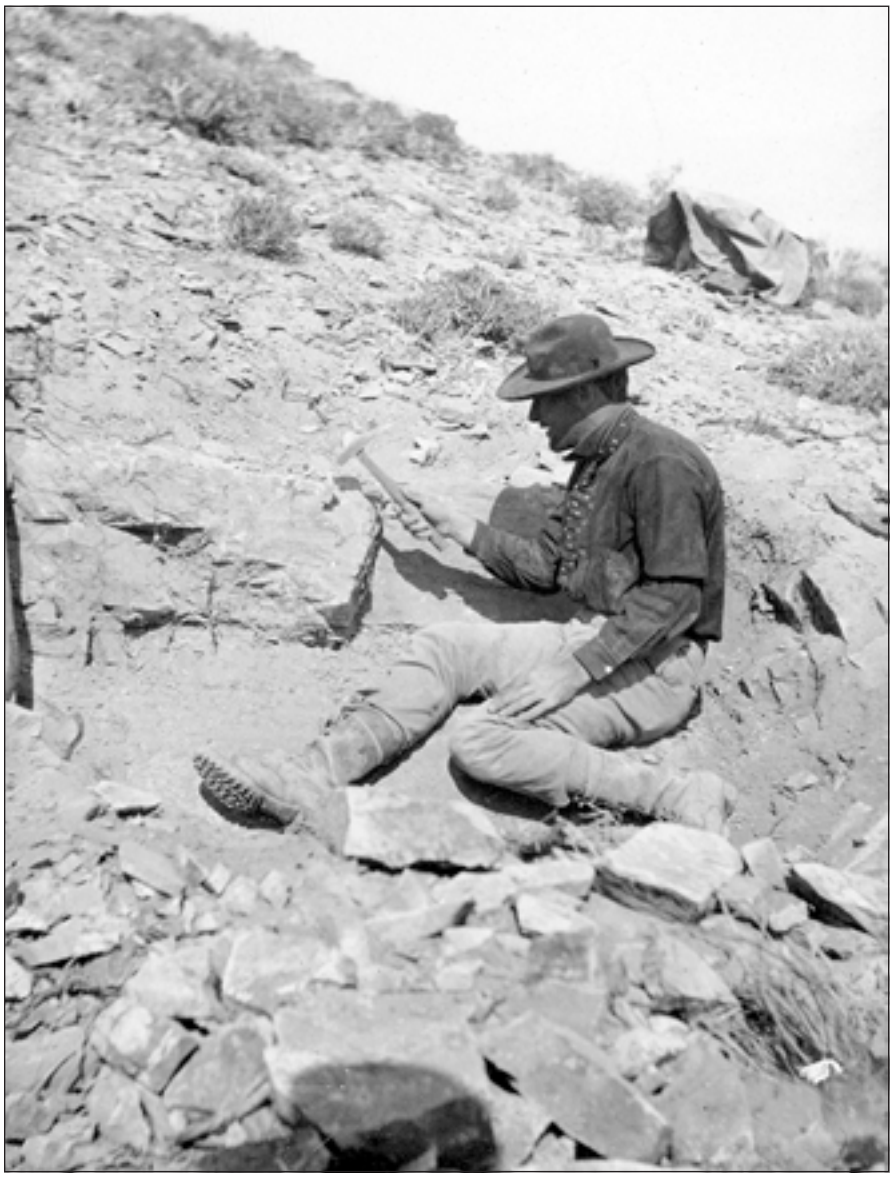
… and lizards that truly showed his scientific turn of mind. Of lizards he had about all the species to be found in the country, and the skill he showed in catching them was worthy of an accomplished angler. It was all done with a small noose at the end of a string. He would walk along, his eyes bent on the ground as if in deep thought, when suddenly, ping! and a lizard was dangling in the air like a fish from a hook. Mr. Boynton had a trained eye for collecting and would have found more specimens than anyone else,—if he had thought it wise, but his experience with the first two he discovered which pitched head foremost straight into the ground, made him discreet. I know indirectly that he carefully covered up one or two promising saurians for some future exploring …

"—The skill he showed in catching them was worthy of an accomplished angler."

"—Ping! and a lizard was dangling in the air like a fish from a hook."

… expedition to discover.

Prof. Smith told an amusing story on himself one day. When a man has a hobby and his hobby is ammonites, and these ammonites are found in quantities beyond his wildest expectations, you can imagine how they might make him forget that two or three weeks scrambling among the rocks would decidedly change his outward appearance. When Prof. Smith returned to Lovelocks, in the Spring of 1902 after his remarkable discoveries of fossil deposits in the Humboldt Range, he walked into Wells Fargo & Co's office and was about to present a draft when one of the clerks asked him if he was loafing about waiting the chance to steal a ride on the train. The insult was too much for Prof. Smith's southern blood. He was about to spring over the counter and …



Mr. Boynton never shaved. He passed through the gorilla stage without loss of temper and attained at the end of two months, a fine glossy brown beard.

… choke the man on the spot when Mr. Osmont laid a detaining hand on his shoulder and advised him to take a look at himself in the glass. The forty-mile ride in the wagon had covered the professor with dust from head to foot. His clothes were not only torn and out at the knees, but his boots were beyond redemption and his face bristled with a week's growth of beard. He had to admit that he did not look his calling as an instructor in a large university.

Speaking of personal appearance though, reminds me of the curious but at the same time delightful effect a good clean shave had on Mr. Furlong. It not only made him look five years younger but was like a glass of champagne to his spirits. For a day he was like sunshine—genial, sympathetic, responsive, lighten- …

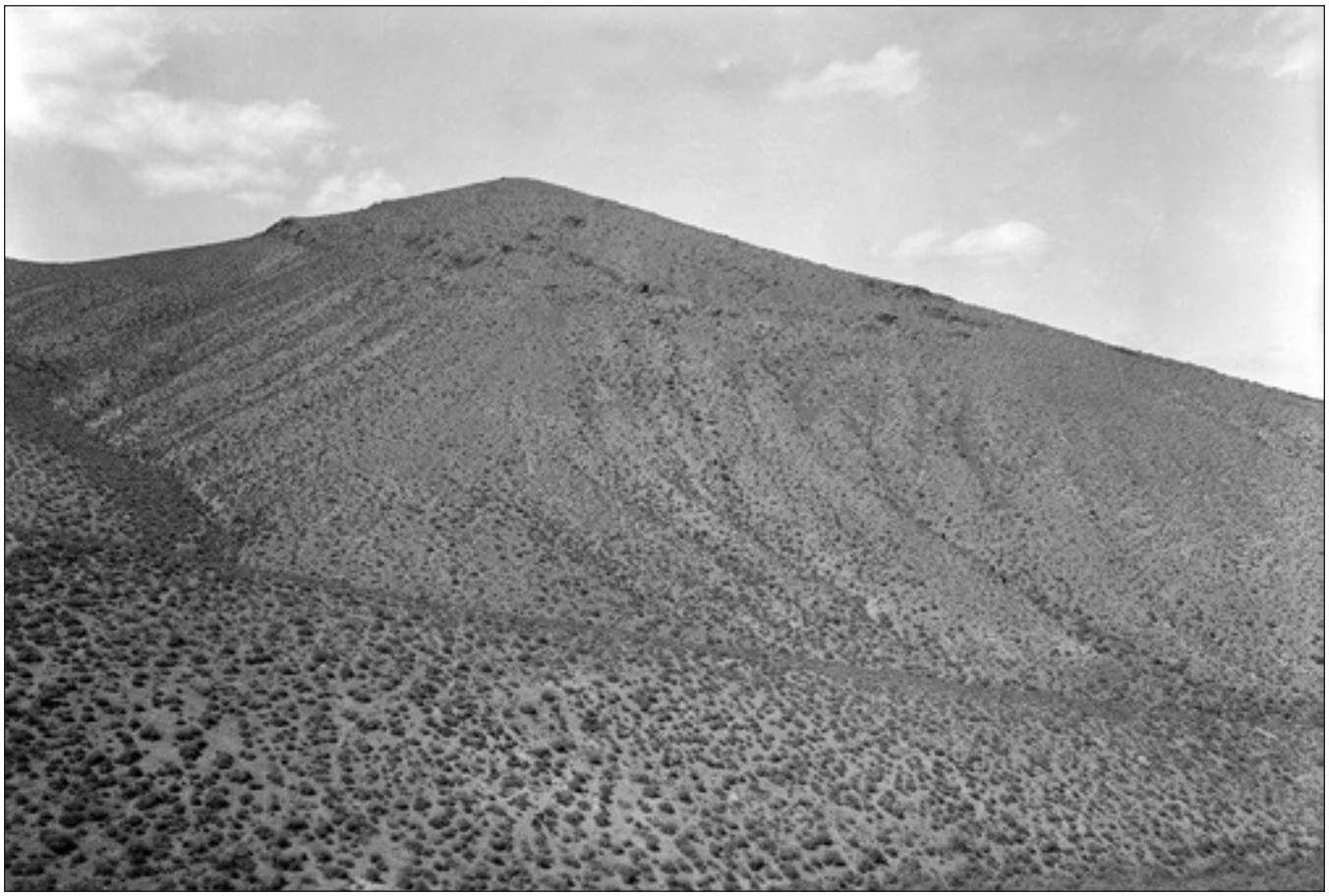


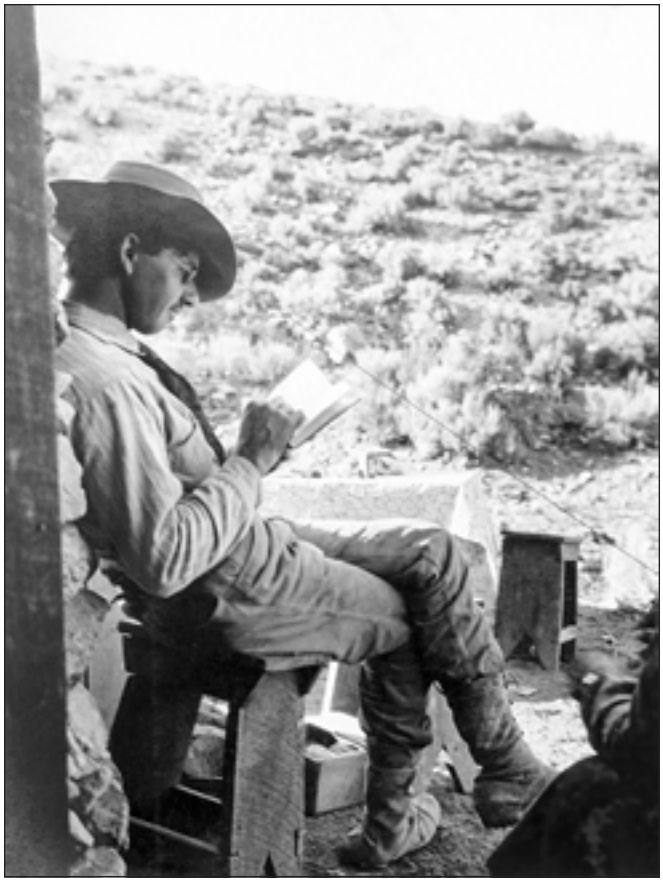
Photo of specimen as it lay in the rock with rib ends and vertebrae exposed.

… ing the burden of the saurian hunt for us all. If I were to attach a moral to this I would say—Please, Mr. Furlong, shave every day. We would all love you so much more!

We worked hard up to the last. My dear friend Miss Wemple stood by me through thick and thin. Together we sat in the dust and sun, marking and wrapping bone. No sooner were those loaded in the wagon for Davison to haul to Mill City than new piles took their places. Night after night we stood before a hot fire to stir rice, or beans, or corn, or soup, contriving the best dinners we could out of our dwindling supply of provisions. We sometimes wondered if the men thought the fire wood dropped out of the sky or whether a fairy godmother brought it to our door, for they never asked any ques- …

A last cup of coffee.

Team that hauled the fossils to Mill City.



Sunday recreation.

Rock that resembled the jaws of an Ichthyosaur. *[Eye and teeth were drawn in with pen.]*

Miss Wemple.

… tions and there was always enough left over for Mr. Furlong to cook flap-jacks and corn meal mush for us in the morning.

All this time we had not given up New Pass, but like a place one sees only in one's dreams, it became invested in a halo of unreality. I think Mr. Boynton was skeptical not only as to whether we ever intended making the journey but as to the actual existence of the place.

We were led to examine Smith's Ridge again by Prof. Smith finding bone at the lowest end of the slope. This opens up a new chapter in our fossil digging and with it ends our adventures. I think too much praise cannot be given to the men for what they accomplished. We could always rely on Mr. Furlong's doing his level best with every specimen, seeing them to the finish if that were possible. Tired though he might be, if there was a …

Drilling. *[Using hammer and chisel to create holes for dynamite.]*

Mr. Boynton standing in "the gorge."

"We could always rely on Mr. Furlong's doing his level best with every specimen."

Right: "—he was not only an unusually powerful man but unfailingly good natured." *[i.e., Boynton]*

… chance of bone in the rock taken out near the specimen he would break it lengthwise and crosswise, scrutinizing every fragment with the greatest care. Again, no matter how shattered a bone might be, he would save every bit to laboriously fit together some day in the laboratory. He had a splendid helper in Mr. Boynton who was not only an unusually powerful man but unfailingly good natured. Their work on the last two specimens, nicknamed the "Tunnel" and the "Gorge", was particularly noteworthy. These occurred not more than thirty yards apart on the West hill of Smith's Ridge. The lower, or "Tunnel" one, comprised the pelvic arch and the entire tail and if I'm not mistaken a portion of the anterior arch. It was of special importance because of the tail, no other anywhere near as complete being …

The "Tunnel"

The "Gorge"

… in the collection. After breaking down the bank for a distance Mr. Furlong proceeded to tunnel and twelve feet or more of rock were taken out before the point of the tail was reached. This occupied a week's time. The "Gorge" specimen took even longer. The animal evidently suffered no disturbance after death for the vertebrae were laid down in perfectly regular file, beginning with the anterior caudals. A slight elevation on the surface of the rock showing just how the animal lay, was a sure guide to follow. In fact so certain did we feel that the skeleton was continuing into the hill without stop or break that six or eight feet of the ledge would be uncovered before removing any blocks. These were so thick and wedged in on either side so tightly that it was a job in itself to get them out. It was thought advisable …

"Gorge" specimen / Elevation in the rock produced by back-bone of Saurian.

The end of the snout lay twelve feet under ground.

… to follow the specimen with an open trench as it would allow more freedom to the arms to swing the pick and shovel. This meant lifting an immense quantity of rock which had to be loosened time and again by blasting. The head which, happily for Science, terminated the skeleton lay beneath a load of twelve feet of bank, all of which had to be torn down. At exactly twelve o'clock on the last day of June two little pieces of bone belonging to the tip ends of the upper and lower jaws were handed me by Mr. Furlong with the injunction to guard them most sacredly. The bulk of the head had come out in a nodule weighing at least 500 lbs. Two pick handles were broken in prying it up. There wasn't a seam in it and all ways and means were discussed as to how to get it to camp whole. One attempt made was to …

The scheme that did not work.

Hole in which the head lay.

… tie it to a juniper tree to be dragged by one of the horses, but something broke and that method was abandoned. Miss Wemple and I left the Cañon the following Monday. Though no plan had yet been hit upon to get the rock down I felt confident Mr. Furlong would devise some scheme, but never dreamed that he single-handed would attempt the feat. When however Mr. Boynton returned after taking us and a load of fossils to Mill City, the deed had been done. The rock had been rolled over and over up the slope and down the other side, a distance of over a mile, by Mr. Furlong. It seems incredible, but such was the case. Pure grit, pluck, dogged perseverence—whatever you may call it—is what accomplishes wonders in our prosaic day. With the Greek heroes it was brute force and occasional help from the …

A string of caudal vertebrae nicknamed "Jacob's Ladder" by Mr. Furlong.

Jaw fragment picked up by Miss Wemple and given me as a keep-sake.

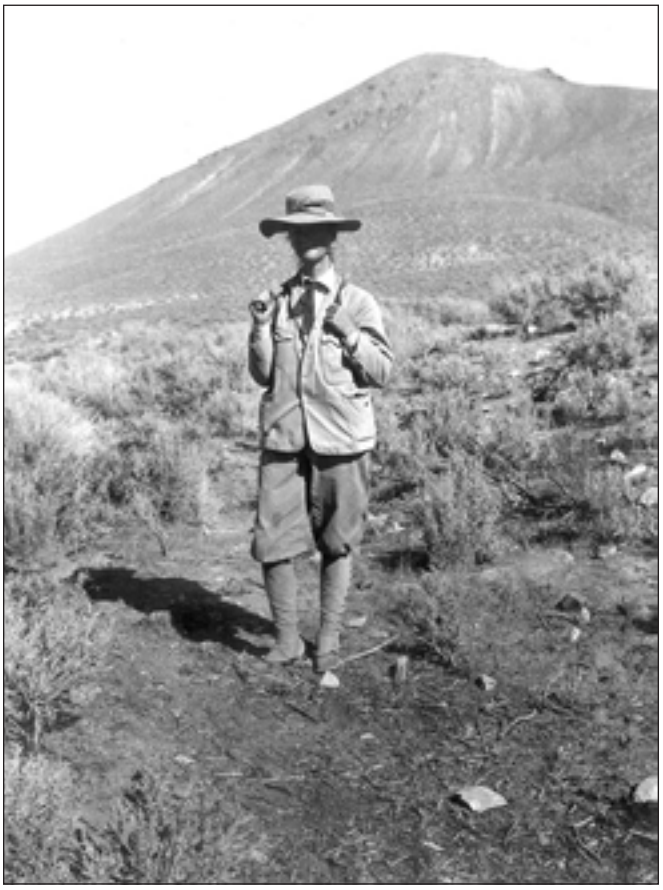
… Gods which wasn't fair and I think they do not half deserve their fame.

The fossils were shipped in boxes from both Lovelocks and Mill City and are now occupying a space of 40 x 60 feet allotted them in the basement of the new Californian building. They include some twenty-five specimens together with valuable fragmentary material. Without question an almost perfect reconstruction of the dominant type of the period represented will be afforded. So much for these creatures rescued from graves where like Milton's damned they have lain "immovable infixed and frozen round periods of time."

People naturally count it among their blessings to have a roof over their heads at night but how oppressive this roof seems to you, and the four walls of your room after a month or two in the open! Half the universe shone down upon us those clear nights in Nevada; not a tree to break the wonderful arch of the Milky Way reaching from horizon to horizon. The same constellation seen night after night as we lay on our backs on the ground made their impress on our minds that a casual view of them from a bedroom window or a city street could never make.

After all I think we would all agree in saying that Nevada was not such a bad country to camp in, notwithstanding the fact that it is called and is, I suppose, a desert.

Annie M. Alexander *[signature]*
August 1905.



Two fossil hunters *[Edna and Annie]* who slaved for Science in the desert wastes of Nevada.