GUSTAVE F. MARSH

&

MOUNT WHITNEY

Compiled by George F. Marsh

22 September 2002 & recompiled 28 April 2005

PREFACE

This work is an outcome of my interest in our family history. From my youth, I remembered a peak had been named for my grandfather, Gustave F. Marsh. While looking through family records that my father, Gus Marsh, had passed on to me, I found a photo of Mount Marsh and Chester Versteeg. Chester Versteeg named Mount Marsh in 1937 and he did the first ascent of it 25 August 1940. However, I could not find it on the topographical maps. The U.S. Board on Geographical Names (USBGN) had no information about it. They said I could submit a proposal to make the name official, and that was done in September of 1997. The proposal included the information I had at that time.

That information put me on a search for the loose-ends. I am still amazed at what I found. Gustave F. Marsh's achievements involved leadership, determination, commitment and daring. He was fully committed to do what he could to make the summit of Mount Whitney readily accessible for science and tourist.

My efforts to make the name Mount Marsh official were encouraged by Inyo County Supervisor Michael Dorame, Tulare County Supervisor William Sanders and U.S. Representative Jerry Lewis. They sent letters to the USBGN supporting the proposal. If an authoritative map had Mount Marsh on it, the USBGN would have approved the proposal outright. Neither of the two counties have a map showing Mount Marsh nor does the Eastern California Museum (ECM). However, Bill Michael, Director of the ECM, told me how to contact Mrs. Janice Hampson, a daughter of Chester Versteeg. Not only did she support the proposal, she supplied considerable information from her father's records. Both my father and his father were friends of Chester Versteeg.

A day after my father's death, 21 April 1998, David Kruger, a friend of my father stopped by. His visit was of immeasurable comfort to me. I believe, out of respect for my father, he offered to climb Mount Marsh. On the 16th of August 1998 he found the register there verifies that Versteeg had climbed Mount Marsh on the 25th of August 1940. For this, I am forever grateful to David Kruger.

While helping my mother, I found a brochure laying in the street. It had information about the Whitney Portal Store and the book "Mount Whitney: Mountain Lore from the Whitney Store." I am indebted to Elisabeth Newbold, an author of the book, for information new to me, encouragement and the acknowledgment, in the book, of Gustave F. Marsh's efforts on Mount Whitney.

The Inyo Register's 28 April 1998 edition published the obituary of Gus Marsh and an article about Mount Marsh. This helped make the people of Owens Valley aware of Gustave F. Marsh (1869-1946) and his contributions to Inyo County. Also, it helped to set the stage for petitions to the USBGN.

The July 2000, Friends of the Eastern California Museum newsletter was dedicated to "Gustave F. Marsh, one of the unsung heroes of the Owens Valley, a man of foresight and vision, who possessed a real appreciation for the things we all enjoy here in the peace and beauty of the Eastern Sierra." Many thanks to Bill Michael, Emilie Foster and the gang at the ECM.

Copies of correspondence by Gustave F. Marsh for the period 1905 to 1940 were mailed to me by: Dorothy Schaumberg of the Lick Observatory, Susan Searcy of the University of Nevada and William Cox of the Smithsonian Institution. This information gave me a much deeper appreciation for the magnitude and difficulty of Gustave F. Marsh's accomplishments on Mount Whitney.

Jim Trumbly of the California Advisory Committee on Geographic Names prepared an outstanding recommendation to approve the proposal and the CACGN unanimously approved the recommendation. The USBGN accepted the recommendation and they made the name Mount Marsh official 10 Jan 2002.

Many thanks to those of Lone Pine, Owens Valley and elsewhere who mailed petitions in favor of Mount Marsh to the U. S. Board on Geographic Names. The Mount Marsh success, in keeping with the Mount Whitney trail & shelter success, was due to the effort of many people.

GUSTAVE F. MARSH & MOUNT WHITNEY

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GUSTAVE F. MARSH

Gustave Marsh (1869-1946) came to the United States from England in 1890. He worked in the mines in Wyoming, the Rocky Mountains of Colorado and then in the Panamint Range of California. Marsh settled in Lone Pine, California in 1900 and married Elizabeth Dodge (see Plate #1) in December 1901. She was the daughter of the late Josiah and Margaret Dodge who had been residents of Lone Pine since 1871. Gustave became a citizen of the U.S.A. and was awarded a contract to carry the U.S. Mail between Lone Pine and the Mount Whitney railroad station in 1902. His Lone Pine & Mt. Whitney Stage Line carried passengers, U. S. Mail & Wells Fargo Express for 28 years.[2]

MOUNT WHITNEY / THE GOAL

When Gustave first climbed Mount Whitney[3] in 1901 and took in the grand view he also saw the potential Mount Whitney had for scientist and for tourist that would benefit Lone Pine as well as the nation. This became Marsh's goal. As he was new to Lone Pine, he could not get the interest of its citizens until 1903 when the Sierra Club put 320 people on the trail to Mt. Whitney from the west side at a cost of $7000 (*1903 dollars*). Only 120 made it to the summit.[4] Professor McAdie of the U.S. Weather Bureau was one of the 120 and he recommended Mt. Whitney as a desirable site for an observatory as had Professor Langley in 1881.[5] Lone Pine now understood what Marsh wanted and why. A crew was put to work building a pack trail that same year, 1903.

THE TRAIL

The first crew to build the trail, with Reuben Spear in charge, started with 14 men and $700. When the funds and determination ran out, the trail had been built to within about 3 miles of the summit. Marsh took over, rustled more funds, took a second crew to 13,000 feet elevation where the first crew had stopped and worked until the end of October when a severe winter storm drove them off the mountain.[6] Also, in September, 1903, the Inyo Independent newspaper reported that George E. Hale was planning to build an Observatory on the summit of Mount Whitney and one near Lone Pine. The plan assumed that a good trail would be in place.[7] However, Hale did not proceed with that plan, but he did establish the Mount Wilson Observatory in 1904. The Sierra Club helped Marsh to get the ball rolling, and Hale helped Marsh to keep it going. The winter of 1903-1904 was severe on the trail, and in 1904 Marsh found that considerable repair was needed before he could get back to the hard part above 13,000 feet elevation.

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[1] Copied from a "draft" provided by Janice (Versteeg) Hampson (She is a daughter of Chester Versteeg).

[2] *Owens Valley Progress Citizen* (Lone Pine, Inyo County, CA.), 3 May 1946, front page, "G. F. Marsh Passes; Many Pay Tribute," Inyo County Library, Independence, CA. See Appendix E. Also, see Appendix L for a chronology of events.

[3] Mount Whitney is the highest peak, 14,494 feet, in the lower 48 states. It is about 13 miles west of Lone Pine, CA.

[4] *Inyo Independent,* (Independence, Inyo County, CA.), 28 May 1909, "Mt. Whitney Ball," Inyo County Library, Independence, CA. See Appendix D.

[5] Francis P. Farquhar, *History of the Sierra Nevada*, (Berkeley, CA, University of California Press, 1965) , pp. 181–182. Also. see Sierra Club Bulletin, June 1904 regarding McAdie's visit to Mt. Whitney in 1903 with the Sierra Club.

[6] *San Francisco Chronicle* (San Francisco, CA), 7 Nov 1909,p. 3; California State University Long Beach Library. A copy of the article is included in Appendix A. Also, see *Saga of Inyo County, (*Taylor Publishing Co., 1977), p. 132.

[7] *Inyo Independent,* 25 Sep 1903, "Mt. Whitney Observatory."

Gustave F. Marsh
(1869-1946)

Gustave Marsh about 1890

Gustave & Elizabeth Dodge 1901

Gustave about 1902

Gustave & son, Gus - 1905

Plate #1

Mary Locker: "…Gustave Marsh (*rustled more money and took a third crew on the trail the 8th of July 1904 and*) took up the construction from Trail Camp at 12,000 feet elevation, then known as Mexican Camp. Marsh started out with 15 men, seven of whom deserted within the first few days. One can hardly blame them. Altitude sickness, isolation and the very intensive hard labor could be withstood by only the hardiest men. With picks, shovels, hand drills and dynamite, they inched their way up the steep talus slope that showed no mercy. Despite severe headaches and nausea, the men held and turned hand drills while others beat on the drills with sledge hammers, to make holes for the dynamite. … Then came the clearing of rocks and boulders with picks and shovels after each blast. At the beginning of August , the men came across a chasm, just a few hundred yards from the summit. It would be impossible to build the trail across it. Everyone thought that was the end of the line ... everyone except Gustave Marsh. He had his crew use dynamite to change the angle of the cliff and fill the chasm with debris." [8]

Marsh finished the trail 17 July 1904. He worked a total of 24 days on the last 3 miles of the trail. That section of the trail can be seen in Plate #2, the west side of Mount Whitney. In a letter to Professor McAdie, dated July 22, 1904, Marsh wrote: "I am glad to inform you that we completed the pack trail to the summit of Mt. Whitney last Sunday, the 18th (*17th*). We had three pack-trains loaded with wood, and one saddle-horse. We had a large fire at night, and fireworks which were plainly seen by those at Lone Pine, who responded with a large fire and fireworks. We had an ideal day to finish the trail. The weather was perfect. We were so anxious to get to the top that we never noticed the altitude. Most of the time it was bitter cold and windy. We were all fearfully sunburned; our faces were a sight and our lips almost black; but we would not give in. The pack-train had no difficultly at all in climbing the mountain. The trail is in good shape and parties are going over it every day." [9]

Dr. C. G. Abbot, Director of Smithsonian Astrophysical Observatory: "In 1904 the citizens of Lone Pine and vicinity, under the leadership of Mr. G. F. Marsh, built a trail to the summit of Mount Whitney, directly up Lone Pine Cañon, over a pass at 13,400 feet, and thence as high as possible on the west side of the range, over waste of granite rocks of all sizes, to the very summit of the mountain. Funds were scanty, and it was, only by the greatest economy, pluck, and perseverance that Mr. Marsh succeeded in getting his trail to the top. To an Easterner it is hardly even a trail now, and even Mr. Marsh said to the writer on our last descent that he hardly saw how the mules could go over it, unless they had hooks on their hind feet to hang on by till they found a place for their fore feet. There are places where, with almost precipitous descent staring them in the face, the mules must step down as far as from a high desk to the floor, landing on jagged rocks, not on dirt or sand. However, they did go over the trail, and in the transportation this year of upwards of 20,000 pounds of material and apparatus for the Smithsonian Institution not a mule was lost or seriously hurt and no material was even injured, thanks to the skill of the packers, especially Mr. Horace Elder. The west slope of the ridge leading to Mt. Whitney is extremely rough and broken throughout. Pinnacles of naked rock rise often nearly vertically, and are crossed both vertically and horizontally by seams and cracks in such a manner as to give the impression of being very crazy, crumbling, insecure structure, likely to be shaken down if a great earthquake should come. Indeed the whole slope is covered, clear to "Langley's Meadow," with rocks of all sizes which have broken off and rolled down. It was through this difficult country that the Lone Pine citizens built their trail. In some places, where they could only proceed by blasting, the rock was too crumbling to be drilled, so that the powder charge had to be tamped into a crack between the rocks, and when exploded would bring down a slide from above sufficient to fill all the space cleared by the blast, and all would have to be done over again and again. It reflects very high credit on Mr. Marsh and his supporters that the trail was ever completed."(See appendix B, pp. 500–501). Dr. Barton Warren Evermann, Chief of the Division of Scientific Inquiry, U. S. Bureau of Fisheries was the first scientist to use the new trail. They were on the summit on 7/26/1904. Unfortunately their packer, Byrd Surby, was killed by lightening while there.[10]

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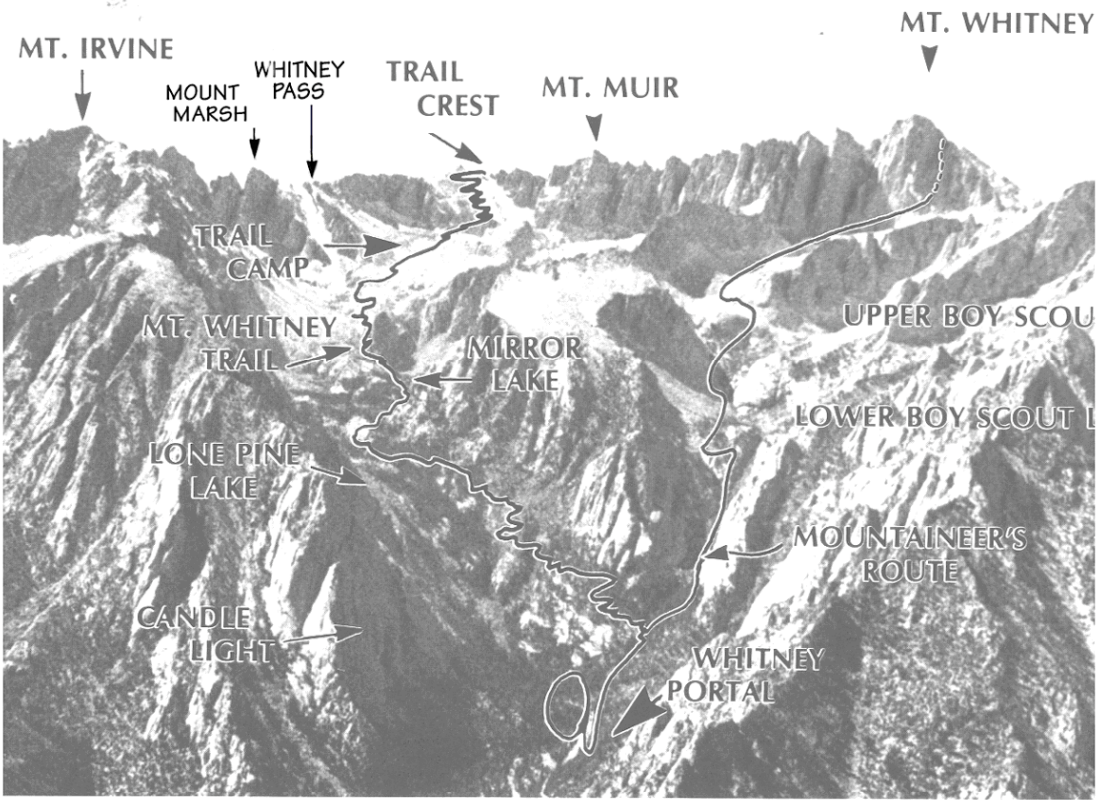
[8] Mary A. Locker "The Construction of the Mt. Whitney Trail," *Sierra Life 26*, IV, No. 2 *(*May/June 1984) pp. 26–31.

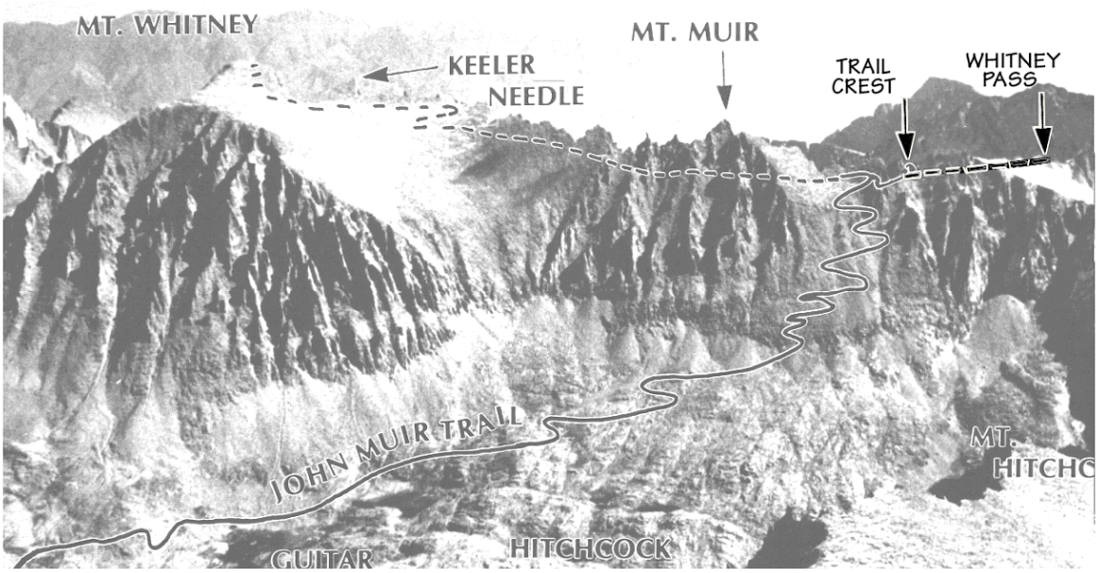
[9] Professor (Alexander G.) McAdie, "A Pack Trail on Mt. Whitney," *Sierra Club Bulletin*, V, No. 3, January, 1905, pp.258–259. The text of the letter from G. F. Marsh is included in the article on page 259.

[10] Francis P. Farquhar, "The Story of Mount Whitney, Part III," *Sierra Club Bulletin,* Vol. XXI, No. 1, Feb 1936, p. 66.

MOUNT WHITNEY FROM THE EAST SIDE



Photos by J. S. Stewart / Stewart Engineering & Graphic Enterprises
with additional editing to show Mount Marsh & Whitney Pass



MOUNT WHITNEY FROM THE WEST SIDE

Plate #2

WINTER CLIMB

Professor Church of the University of Nevada, Reno, persuaded Marsh to climb with him to the summit of Mount Whitney in March of 1905.[11] McAdie and Church were members of the Sierra Club. Apparently, McAdie informed Church, who wanted to explore snow conditions on Mt. Whitney, of Marsh's knowledge of the mountain. When Church asked Marsh to do the climb, Marsh responded: "Your letter to hand yesterday asking if I would accompany you to Mt. Whitney I was very much surprised as it is such an unusual trip for this time of the year & one that no one has ever attempted before & very few even in the summer. But I will be glad to make the attempt with you, but you must remember it will be a hard trip, but much will depend on the amount of snow. I have no doubt you have had some experience in mountain climbing in winter judging by your letter & have no doubt been at high altitude in winter. … There is only 2 dangerous places on the trail, one at Lone Pine Pass where if we go off it will take some time to get somewhere & the other is Lake View Camp where if we fall off, well we will be going yet. I never saw the bottom & I don't think any one else did, I take it for granted you fully realize the danger of the trip. A few false moves & we are liable to make pretty good time for awhile." [12] Marsh and Church spent 8 days in March of 1905 on the mountain, but were unable to gain the summit. They were turned back near Lake View Camp, 13,300 feet elevation, by the cracking of the snow above them and the presence of a cliff directly below them. Had the severe winter conditions not been aggravated by storms, 3 days would have been enough to get to the top and back. Appendix C is a copy of Church's account of the trip, "Up from 'The Land of Little Rain' to the Land of Snows." Also, Marsh reminisces about the excursion in a letter to Church in 1930: "This is to thank you very much for your picture of Mount Whitney from the aeroplane. It brought back many pleasant memories of our trip so long ago. I made a good many trips up there afterwards but I think that was the most dangerous. You remember when we went over Whitney Pass and the whole mountain started down. It did not feel so good. And then walking in that deep soft snow and then to come under that great comb of snow hanging over us. How we tried and shoveled and tried again and how you said we are taking our lives in our hands every 5 minutes. So I said we had better quit. I wish you could have seen that place when the snow was gone. It would make you shiver. That was a trip that I shall never forget. No one has ever made that trip under such conditions and so much snow." [13] Charles H. Lee, a member of the Sierra Club, wrote: "It is only occasionally that anyone attempts to climb to high elevations in the Sierra Nevada during the winter months." [14] It appears, both men had considerable high altitude winter climbing experience.

FIRST SCIENCE

In the summer of 1905 Marsh guided and assisted a scientific team in the charge of Frank Adams of the U. S. Department of Agriculture to the summit to make evaporation measurements. This was the first science team for him to guide to the summit. Gustave had notified that Department of the completion of the trail in 1904.[15] In regard to this expedition, Marsh made 2 trips to Mt. Whitney's summit to help make evaporation tests at different altitudes. The first trip was to take the scientist to the summit & back. The second trip, alone, was to take the last readings and to bring down the instruments. He said, "…the trail was in fair shape, but had to shoot out a big boulder at Lone Pine Pass (*Whitney Pass*) and pack animals go along all right."[16]

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[11] Letter from J. E. Church to Chester Versteeg regarding his trip with Marsh to Mt. Whitney in March, 1905, 5 Feb 1940. The Eastern California Museum (hereinafter ECM), Independence, CA has a copy of the letter in the note book:, "Gustave F. Marsh, Sr. / Mount Whitney, Correspondence, 1904–1940." See the Correspondence Catalog in Appendix K

[12] Letter from G. F. Marsh to Church ,10 Jan 1905, regarding a plan to climb Mt. Whitney in the winter, *supra* N. 11, ECM.

[13] Letter from G. F. Marsh to J. E. Church, 2 Jan 1930 regarding their trip in 1905 & the building of the shelter on Mt. Whitney, *supra* N. 11, ECM.

[14] Charles H. Lee, "Winter in the High Sierra," *Sierra Club Bulletin*, Vol. VII, No. 4, June, 1910, p. 239.

[15] Letter from S. Fortier, Irrigation Engineer, in charge Pacific District, U.S. Dept. of Agriculture to G. F. Marsh, 20 Jul 1905, *supra* N. 11, ECM.

[16] Letter from G. F. Marsh to J. E. Church, 24 Sep 1905, regarding the Dept. of Agriculture testing, *supra* N 11, ECM.

THE SHELTER

In 1908, Dr. W. W. Campbell, Director of the Lick Observatory, asked McAdie for advice to get an expedition on the summit of Mt. Whitney and McAdie indicated that Gustave Marsh was the man to do it.[17] Campbell arranged with Marsh to take him and Abbot to reconnoiter Mt. Whitney in the summer of 1908 and on the trip they decided that a shelter was needed on the summit.[18] Marsh spent considerable time and effort on his own for the next 12 months with both astronomers and the Smithsonian Institution to help the project develop and become a reality. Marsh wrote "I was the first one to start the idea of building the trail and when all others failed I rustled the money and finished the trail myself, but I cannot work all the time for nothing, but I have taken such an interest in this that I would like to see it through." [19] He was paid, $5 per day (most of which went to pay a man to take over his stage line) to be the superintendent of the construction of the shelter and only for the time spent building it. However, he was working towards his goal. Also, Marsh had to guarantee that the trail would be in good shape at no expense to the Smithsonian Institution. The entire project was put on hold when the bids for transporting materials to the summit were found to be exorbitant. Marsh wrote, "I hope you will not condemn me for making my estimate so low. I thought that the packers would be willing to try & do something to help the project along. I have done all I could for the past 8 years & have hoped to see the shelter up & I will still try to do all I can."[20] Charles W. Robinson of Independence came through with an acceptable bid and rescued the project. Marsh arranged a grand ball to raise funds for the repair of the trail and it was very successful. The Inyo Independent wrote a glowing account of the Ball (see Appendix D). The shelter needed to be ready no later than the first of September 1909 for the expedition to be successful.[21] It was planned to start the repair of the trail on the 1st of July, however, heavy winter snows prevented starting it until 18 July 1909. Marsh had less than 7 weeks to repair the trail and build the shelter. The trail was finished on the 28th and the construction of the shelter began immediately. Marsh had carefully planned and accomplished the timely arrival of over 13,000 pounds of materials for the construction of the shelter. The materials were shipped from San Francisco by railway to the Mt. Whitney station near Lone Pine, by wagon to the base of the Sierra Nevada and by mule train to the summit of Mt. Whitney. Many more pounds of tools, fire wood, food etc. had to be carried up the trail for the workers. The last water was at about 12,000 feet elevation. Snow was available closer and was melted on sheet iron for mixing the cement. Marsh was in charge of all of it from the Mt. Whitney railway station to the summit. Marsh wrote to Abbot: "I shall try to get the men together & work on the trail as soon as possible, but I want all the men I can to start on the trail & be ready to go to work on the building when we get to the top. … Some boys working on the power site in Lone Pine Canyon will donate their work up to Lone Pine Lake. If I can get the same men to work on the trail, the few days will get them accustomed to the altitude." [22]

Marsh wrote to Church in 1930: "During the time of putting up the building (*the Smithsonian shelter*) I stayed on top (*of Mt. Whitney*) 43 days. I had 15 men to start with and only 5 at the finish. We had a terrible thunder storm when we were almost done. Our cook was knocked down by a flash of lightning at 9 o'clock one night and another flash almost finished us all. But the storm passed in a few minutes. Leaving all jagged points of rock and squares on the sand screen and the fuzz on the ropes one mass of lights. St. Elmo's Fire, we did not know what it was. So you can guess how scared we was. I urged the men to work fast so as to get done and get away. When next day at about 5 P.M. we heard muttering of thunder way

[17] Letter from W. W. Campbell to G. F. Marsh, 11 Jun 1908, asking Marsh for advise & to accompany him to reconnoiter the summit of Mt. Whitney, *supra* N. 11, ECM.

[18] Letter from W. W. Campbell to G. F. Marsh, 2 Sep 1908, *supra* N. 11, ECM.

[19] Letter from G. F. Marsh to Chas Walcott (Secretary, Smithsonian Institution), 4 Mar 1909, informs Walcott that he had made 10 trips to the top of Mt. Whitney & worked 24 days on the trail above 13,500. Also, offers to be their superintendent at $5 per day, *supra* N. 11, ECM.

[20] Letter from G. F. Marsh to Chas. Walcott, 21 Mar 1909, *supra* N. 11, ECM.

[21] Francis P. Farquhar, *History of the Sierra Nevada*, (Berkeley, CA, University of California Press, 1965) , p. 69. By 9/6/1909 the moon would be too far away to measure identical conditions for both Mars & the Moon.

[22] Letter from G. F. Marsh to C. G. Abbot, 27 May 1909, describes the success of the Ball to raise funds for the trail, *supra* N. 11, ECM.

over towards Arizona and the clouds rolled up the mountain just as the sun went down. I wish you could have seen those clouds in red suns rays, If Hell was ever turn loose it was in those clouds. I told the men to get under cover and we would be alright. But one by one they ran down the mountain and left me alone. So I went to bed and covered up my head, like a kid, till the storm passed over. I was alone 3 days. Then the men came back and we was glad all around. Prof. Abbot came up a few days after, just as the work was done. I got every thing completed 24 hours ahead of time and $250.00 below my estimate. So I was happy." [23] Plate #3 shows the shelter from start to finish.

In regard to the building of the shelter Abbot wrote: "In carrying out the construction *(of the Mt. Whitney shelter)* Director Campbell offered to act as the Institution's agent in San Francisco to award contracts for steel and cement, and to supervise the construction and actual trial erection in San Francisco of all steel parts. He performed this work with the most conscientious and painstaking care. The charge of the transportation from Mt. Whitney Station to the summit and the construction of the building were intrusted to Mr. G. F. Marsh, of Lone Pine. It was an article of agreement with Mr. Marsh that the Institution should be at no expense for the repair of the trail, and so as early as April Mr. Marsh and his friends held a ball at Lone Pine which proved to be a highly enjoyable and successful affair and netted a considerable fund. *(Both Abbot & Campbell personally contributed to the fund*) As soon as work could begin he started on the trail, but was hindered by the deep snows until later than had been expected. The first mule train reached the top July 28, 1909, and Mr. Marsh completed the house just a month later. …I found that a few days before my coming (*to the summit of Mount Whitney in August 1909*) there had been a thunder-storm on the mountain one night. One of the men had gone out of the tent and had been nearly killed by lightning or fright. There is a monument close by where a man (*Burt Surby*) was killed by lightning in 1904. All the mountain was glowing with St. Elmo's fire, and they all had been pretty uneasy. (*No one on the peak had any knowledge whatsoever of this phenomenon and they were very aware of Surby's demise.*) On the following night all the workmen left Mr. Marsh and ran down the trail when another storm began. However, they returned to him in a couple of days, thanks to his grit in staying on top all alone. I found also that a number of people in Lone Pine had been working against the project, and that Mr. Marsh had had great difficulty to repair the trail. There was so much snow and ice, and he and others were completely snow-blinded for a day or so. The packers had been slow in beginning, and had deserted the job once or twice, so that he had to leave the top once and go down to Lone Pine and stir up Mr. Robinson. Mr. Marsh told me that once he was so discouraged that he sat down on the trail and cried, but got up and went at it again. In the face of the opposition and the natural difficulties, I think very few men could have carried the job to completion. Marsh worked at all kinds of jobs himself—cooking, breaking stone, carrying stone, carrying snow for water, riveting and cementing, as well as general bossing. He will never get paid in this world for the work he did on that house." (See Appendix B, pp. 503–505). Marsh stayed on the summit with the expedition after completing the shelter and came down with Abbot, who was the last to leave. It's probably safe to say that the 30 days (see Appendix E) that Marsh was on the summit continuously is a record unbeaten even today. (However, I calculated 36 days, August 3 to September 8, 1909.) He was on the summit for a total of 43 days in 1909.[24] Appendix H is a copy of the letter of appreciation to G. F. Marsh from Chas. D. Walcott, Secretary of the Smithsonian Institution. Also, see Appendix K for a catalog of other correspondence.

W. W. Campbell, in November 1909: "It (*the Mt. Whitney shelter*) is a great credit to the Smithsonian Institution and to the superintendent of the construction, G. F. Marsh, a public-spirited citizen of Lone Pine, who struggled, valiantly and successfully against the difficulties of transporting cement and steel to the summit, as well as difficulties of less open character. Marsh's connection with the project is one in which he is entitled to feel the utmost pride, and I trust that his fellow citizens of Lone Pine and Inyo County will appreciate his services in this connection." (See Appendix A)

[23] Letter from G. F. Marsh to J. E. Church, 2 Jan 1930, *supra* N. 11, ECM.

[24] Letter from G. F. Marsh to J. E. Church, 2 Jan 1930, *supra* N. 11, ECM.

THE SMITHSONIAN MOUNT WHITNEY SHELTER

August 1909

Foundation laid - G.F. Marsh, left of door frame

Walls going up - Marsh, left of back door

Campbell's horizontal telescope

Abbot's bolometer

Shelter on the summit

McAdie first on the left, Abbot 2nd & Marsh 5th

Plate #3

Professor McAdie of the U.S. Weather Bureau: "Mr. G. F. Marsh of Lone Pine had been on the summit (*Mount Whitney*) since July 8th (*7/28/1909*), superintending the erection of the observatory. Of Marsh I think I voice the sentiment of the entire party that he was a host in himself. To him more than any other one man is due the successful completion of the trail and the building of the observatory." [25] (See Appendix G for information regarding the scientists: Abbot, Campbell, Church & McAdie.)

HALLEY'S COMET

Gustave Marsh was anxious to see Halley's comet & the eclipse of the Moon from the summit of Mount Whitney. Here is a edited version of his letter to W. W. Campbell, "I was very anxious to see the shelter & so many promised to go with me, but they all fell down at the last minute. So I determined to go alone and I started 22 May 1910, Sunday morning, at 8:30 A.M. & figured to be on the top at 12 A.M. the next day & see the Comet & Eclipse. I took my time, got to Lone Pine Lake 4:20, first snow was at 10,000 ft & small patches of snow off an on to timber line & was at Robinson's Camp at 5 P.M.. I fixed my camp, built a big fire & made me a pretty good bed with some boxes for a wind break. I got up at 3 A.M., had breakfast & started out just as it was light enough, about 4 A.M. The snow was just right for traveling & I made good time to that first big snow bank where the snow was so hard I could not get a footing. My snow shoes would not hold, so I took to the rocks & with my snow shoes & blanket it was quite a task. It was good going till I got to about 12,500 ft, about where the ice was last year. I could not use my snow shoes, I used them to dig holes for my feet. I found that was very difficult. I had to stamp my feet down till I got a footing. The higher I got the worse it got & I dare not turn round. So I made a bee line for the cliffs towards the east, but oh my it was so slow. I had to make sure of every step. At Lone Pine Pass the snow was in ridges. On the Lone Pine side I never saw the snow so smooth & hard & it was easy going to Lake View Camp. From there, there was very little snow till I got to the big bank near Mt Whitney. I got to the top at 11:15 A.M., oh but I was tired.

It was a beautiful day & I got ready to see the comet but at 5 PM it got cloudy but the moon came up full speed alright & was clear as a bell but towards night it clouded again & for the first quarter of the moon it was cloudy but after that it was clear. The comet was in plain view as soon as it was dark & just before the moon was covered. The sky was perfectly clear except the fog bank very low down towards Visalia & the comet showed up grand & was in plane sight until the head of the comet got in the fog bank. It seemed particularly bright at about 8.30 when the moon was almost covered. The tail almost reached the moon & it swept almost across the sky. I feel sure I had the best view of anyone out side of an observatory. I made a signal fire at night & saw 5 fires in return. There was 10% frost the night of the 23rd, at 5 PM it was 36° & at 7 AM it was 22°. I left the top at 7:15 A.M. the next & got home in town at 2:30 P.M.. I found it more difficult coming down the snow on the Lone Pine side than it was going up, but I kept to the rocks all I could I slipped once but did not slide very far. I was very tired for days. Hoping to see you again soon. I shall be glad to introduce you to Maule Whitney Marsh born March 21st." (see Appendix F for details and other publications.)

In addition to the comet and the lunar eclipse, Marsh wanted to see how the shelter fared through its first winter and to recover the temperature data from the thermometers that McAdie had left there last September. Prof. McAdie wrote to Mr. William Colby, Secretary, Sierra Club, May 25, 1910: "I received to-day a telegram from Mr. G. F. Marsh, of Lone Pine, saying that he climbed Mount Whitney and reached the summit yesterday and found our instruments left there last August all right. He gives the lowest temperature on the top of the United States proper last winter as 23° below zero and the highest, 57°. … It is quite an achievement to reach the summit so early in the year." [26] The climb and return were done with considerable difficulty and risk.

[25] Alexander McAdie, "The Observatory on Mount Whitney," *Sierra Club Bulletin*, Vol. VII, No. 3, January 1910, p. 143

[26] Alexander G. McAdie, "Notes & Correspondence," *Sierra Club Bulletin*, Vol. 7, No. 4, June 1910, p. 248.

SOLAR OBSERVATIONS / 1910

Marsh's second trip in the year 1910, August 8 to 22, was to guide and assist Abbot to make additional observations of the solar "constant." [27] Abbot reported that he had 10 beautiful days of observations. While there, they made repairs and improvements to the shelter.[28] The previous year, Abbot left considerable equipment in the shelter, but this year he had no plans to return to the shelter. They packed up everything from the 1909 & 1910 expeditions for its return to the Smithsonian Institution.

RADIATION OBSERVATIONS / 1913

The last evidence I have of Marsh on the summit was in 1913. He guided A. K. Ångström of the Smithsonian Institution & representatives of the U. S. Weather Bureau to the summit of Mt. Whitney for scientific observations. Ångström was on the summit from the 1st of August to the 13th, 1913 and he wrote: "That the climbing of the mountain, with many instruments and a large pack train, succeeded without accident, is largely due to the excellent work of Mr. G. F. Marsh, of Lone Pine, who had worked for weeks with a gang of 20 men to open up the trail, so that ascent might be possible for men and pack animals carrying provisions, instruments, and fuel." [29] The Smithsonian offered $250 for trail improvements if Lone Pine would contribute at least the same amount and if Marsh would supervise the work. Marsh rustled up the matching funds and took a crew to improve the trail.[30] The Weather Bureau took cylinders of hydrogen gas[31] for the balloons to make high altitude measurements. I have not seen any reports of explosions, even though they had the customary greeting as noted by Ångström: "A thrilling electrical storm raged for some time. Every point of rock and the tips of the nails and hair emitted electric discharges. But the little stone-and-iron building of the Smithsonian Institution furnished shelter." The Campbell Expedition of 1909 had similar experiences and McAdie remarked: "On one occasion the hairs on the burros stood out straight and at the same time a brass button on my cap over my left temple gave little sparks. … I think if the storm had been a trifle more intense there would have been 4 or 5 dead astronomers on the summit." [32]

THE GOAL REALIZED

Crispen Woods, 1955: "Gustafe (*Gustave*) Marsh made his home in Lone Pine in 1901. His wife has described Marsh as 'A man who was vitally interested in the promotion and future of Lone Pine,' Marsh had been engaged in mining at Ballarat and had fished in the Whitney region, but did not climb the peak until 1901. From his trip to the peak of Whitney and his daily observation of its magnificence came the inspiration for a life-long hobby. Marsh recognized that here was the key to building Lone Pine, If the mountain were readily accessible and the people were aware of its grandeur, the obvious gateway to Whitney would be through Lone Pine." [33]

Wheelock & Condon: "There is no doubt about the increasing popularity of the Mount Whitney climb. The following figures from the Sequoia National Park office show the numbers that have registered at the summit:" 2,658 in 1957, 5,490 in 1959 & 8,869 in 1969.[34]

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[27] C. G. Abbot, "Studying the Sun's Heat on Mountain Peaks in Desert Lands," *Smithsonian (Institution) Report for 1920,* Government Printing Office, Washington, 1922, Pub. 2623, pp. 149–150.

[28] Letter from Abbot to Marsh, 14 July 1910, planning for the 1910 trip to the top of Mt. Whitney, *supra* N. 11, ECM

[29] Francis P. Farquhar, "The Story of Mount Whitney, Part III," *Sierra Club Bulletin,* Vol. XXI, No. 1, Feb 1936, pp. 71–72.

[30] Letters from Smithsonian to Marsh: 6 Apr 1911, 28 Jun 1912 & 12 Mar 1913 regarding trail improvements, *supra* N. 11, ECM

[31] Letter from Smithsonian to Marsh, 10 Jul 1913, regarding the shipment of hydrogen gas for Mt. Whitney experiments, *supra* N. 11, ECM

[32] Francis P. Farquhar, "The Story of Mount Whitney, Part III," *Sierra Club Bulletin,* Vol. XXI, No. 1, Feb 1936, p. 70.

[33] Crispen Melton Wood, "*A History of Mount Whitney* (unpublished Master Thesis) (Stockton, CA, University of the Pacific, June 1955), p. 83.

[34] Wheelock & Condon, *Climbing Mount Whitney* (Glendale, CA: La Siesta Press, 1960), p. 34.

Tom Graham: "In the 1970s, an average of 10,000 people hiked to the top (*of Mt. Whitney*) each year. The one day record is 965 visitors." [35]

The 1999 Mount Whitney hiking season: 14,000 day-hike permits and 9,800 overnight permits were issued by the INF (Inyo National Forest)[36] .

In the year 2000, permits were issued via a lottery system that selected winners from those that applied in February. Daily access was limited to 75 over night and 150 day hikers per day.[37]

Marsh's prophesy that the trail would attract tourist has become a fact.

Marsh's achievements have been chronicled in : The San Francisco Chronicle (7 Nov 1909), Death Valley Days radio program (The Story of Mt. Whitney, broadcast 12 August 1938), Cavalcade of America radio program (Man Against the Mountain, broadcast 17 Feb 1947), several Sierra Club Bulletins and several books, as recent as 1984, 1989 and 1997, all referenced in Appendix I. Appendix L is a Chronology of Events regarding Gustave F. Marsh. Appendix M has a copy of The Inyo Independent newspaper article dated 25 Oct 1912 regarding Marsh's campaign for Supervisor of the Inyo County Fourth District. It is a good overview of the man, Gustave F. Marsh.

When the shelter project was put on hold (letter dated 15 Mar 1909) by the Smithsonian Institution because of unreasonable bids from the packers, Marsh said: **" I have done all I could for the past 8 years. I have hoped to see the shelter up & will still try to do all I can."** Marsh determined to see his goal accomplished, got a reasonable bid and the project was back on track. This was one of many problems to be solved and Marsh handled them all, including temporary desertion by the crew. They came back because Marsh was there alone for several days still working to complete the shelter and it was completed ahead time and below budget. To do this before the first of September, 1909, he had less than 7 weeks to repair the trail and build the shelter as heavy snow had prevented starting the trail until 18 July 1909. There was no going home at the end of the day. They lived and worked on the mountain under extreme conditions. The closeness of Mars to the Earth in 1909 would not occur again until 1924. Also, it was important that the Moon be near to Mars, as it was in 1909, for comparative measurements of their atmospheres. These conditions made the first of September an important goal for the shelter to be available for the success of Campbell's Expedition.

Chester Versteeg was the first to recognize that Gustave F. Marsh earned the honor to have a peak named for him. His choice of the peak is most fitting as it overlooks much of the area where Gustave Marsh made a significant contribution. The U.S. Board on Geographic Names made the name **Mount Marsh** official 10 Jan 2002. (Details of Mount Marsh are included in Appendix J.)

[35] *The San Francisco Chronicle* (San Francisco, CA), 10 Aug 1992, B11; Sports, The paper sent me a printout of the article.

[36] *The Inyo Register* (Bishop, CA), 22 Jun 2000, front page, "Is Mt. Whitney helping attract business or being over-run, exploited?"

[37] This information was found, 7 Aug 2000, on the Web Site: http://www.r5.fs.fed.us/inyo/vvc/permits.htm. It is captioned as "Inyo N.F. Wilderness Permits".

Appendix A

San Francisco Chronicle, 7 Nov 1909

"THE HIGHEST HOUSE IN AMERICA"

by Harold French

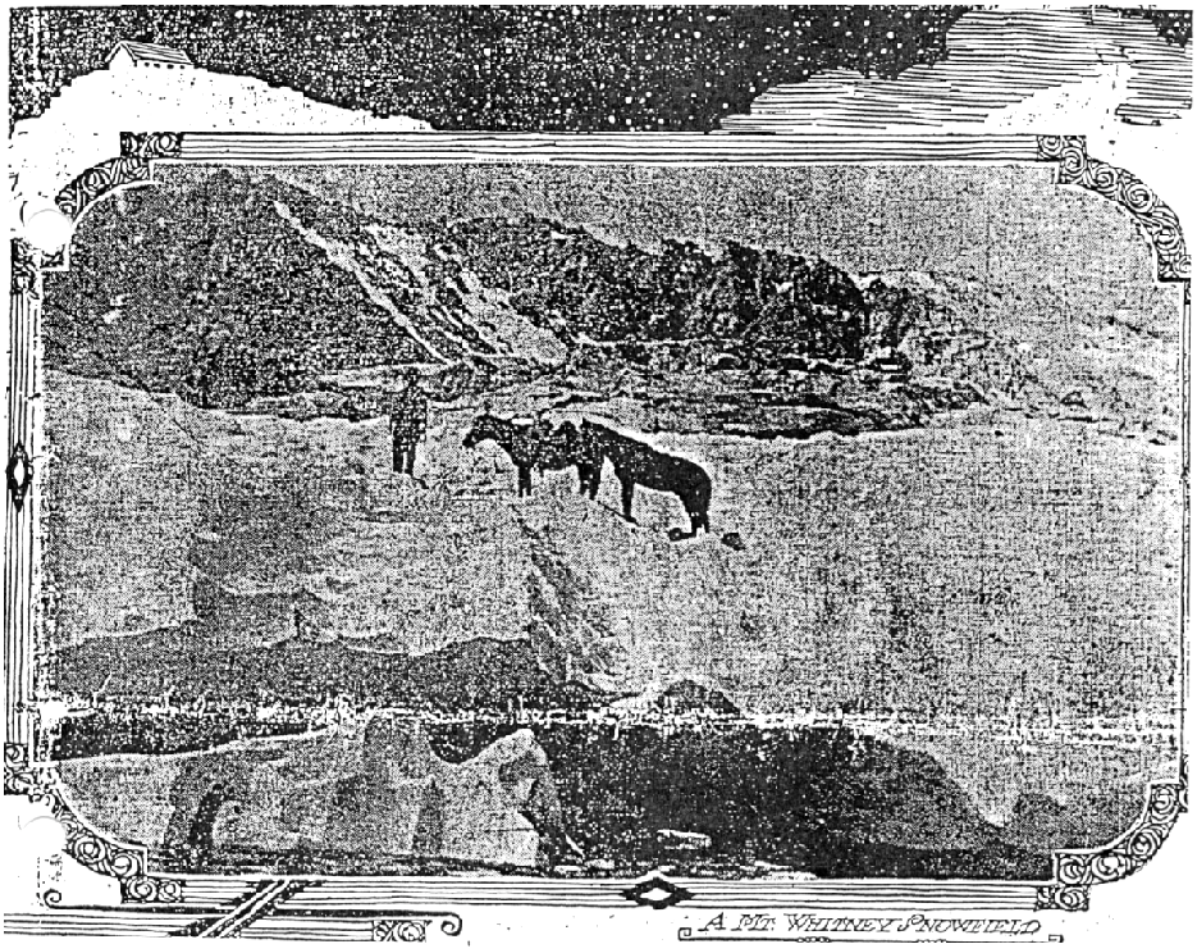
This article covered nearly the whole of page 3. Therefore, it was cut and pasted to fit it on five 8 1/2 x 11 inch pages. The copy in Gustave F. Marsh's records has garbled lines due to creases existing from 1909. However, a microfilm copy found in the Long Beach California State University Library was whole. A separate page with the missing words follows the 5 pages. At the end of this appendix is a completely retyped copy of the article.

Appendix A

SAN FRANCISCO CHRONICLE , SUNDAY, NOVEMBER 7, 1909

THE HIGHEST HOUSE IN AMERICA

HOW THE NEW OBSERVATORY ON MT. WHITNEY WAS CONSTRUCTED



A MT. WHITNEY SNOWFIELD

SAN FRANCISCO CHRONICLE , SUNDAY, NOVEMBER 7, 1909

By HAROLD FRENCH.

CEMENTED to a granite foundation, 14,501 feet above sea level, a "class A." fire and earthquake proof structure of stone and steel now crowns the crest of Mount Whitney, the highest point in the United States. The observatory was constructed late last August by the Smithsonian Institution, represented by Dr. Abbot, director of the Mount Wilson observatory, with the co-operation of Professor Alexander G. MacAdie of the United States Weather Bureau and Dr. Campbell, director of Lick observatory. Concerning it, the latter of these noted men of science says: "It is a great credit to the Smithsonian Institution and to the superintendent of construction, G. F. Marsh, a public-spirited citizen of Lone Pine, who struggled valiantly and successfully against the difficulties of transporting cement and steel to the summit, as well as difficulties of less open character, besides connection with the project is one in which he is entitled to feel the utmost pride, and I trust that his fellow citizens of Lone Pine and Inyo county will appreciate his services in this connection."

Important as is the scientific value of this unique observatory, its deeper human interest lies in the heroic efforts of "the men who blazed the trail." Indeed, the building of this citadel of science might have been indefinitely deferred were it not for the perseverance of a man with a high ideal. For eight long, discouraging years his fixed purpose of life was to accomplish the erection of an observatory on the summit of Mount Whitney, having the faith and foresight to realize what a great advantage such an attraction would be to his community, for whose betterment he labored. With a few resolute companions, he struggled with the elements far up that savage Sierran scarp, and by his force of character overcame the more insidious obstacles of jealousy and doubt which beset his path below. How these men of tried steel hewed their way through barriers of granite and ice is a story for the pen of a Kipling to relate. Readers of realistic fiction who have traveled in "The Bridge Builders" or "Caleb West, Master Diver," would find the facts regarding the building of the Lone Pine trail and the dream of the observatory fulfilled a volume of even more tensely thrilling interest.

#1

G. F. MARSH WHO BUILT THE TRAIL AND OBSERVATORY

#2

PEOPLE OF LONE PINE PAVE WAY.

An eagle soaring from the summit of Mount Whitney toward the sunrise fourteen miles in an air line would glance nearly eleven thousand feet directly down upon the little town of Lone Pine. For more than a third of a century it has slumbered peacefully in the secluded valley of the Owens river, which skirts the eastern foothills of the Sierra for 100 miles down to the dead sea of California, Owens lake. Then new blood revived these isolated towns of Inyo, and, following certain enterprising newcomers, came a railroad which will soon carry out the produce of Owens valley. Twenty streams pouring forth from the Sierran snowfields are now being harnessed for the generation of more than 100,000 horse-power, while the water is being diverted to the rich valley soil with a degree of success that is repeating the history of irrigation in Southern California. Among these desirable citizens came an Englishman, Gustave F. Marsh, who, after investigating the opportunities of other districts of the awakening West, decided to share in the development of Inyo county.

He located in Lone Pine, and eight years ago joined with other progressive residents of Inyo county in agitating a popular sentiment in favor of building a pack trail to the summit of the mountain. With few exceptions the people of Lone Pine perceived that the construction of a safe trail up Mount Whitney would attract scientists to the summit, and that their influence might induce the Government to establish an observatory there, which would naturally bring their town into prominence. In August, 1903, Messrs. Spears, Cross and Spears, together with the photographer, Harvey, returned from a reconnoitering trip over the proposed route. Their reports were so favorable that the sum of $700 was promptly subscribed for the purpose of outfitting a party of fourteen, who, under the direction of Mr. Spears, constructed the trail up through the foaming canyon of Lone Pine creek, past the picturesque "Lake of the Lonesome Pine" to the pass of the same romantic name at an elevation of 13,000 feet. Although within three and one-half miles of the summit, the pioneer party was compelled to abandon the work because the funds had become exhausted.

The heroic and herculean task of carving a course through granite ice and avalanche-accumulating slide rock was far more difficult and expensive than bargained for, and all who have struggled with the overwhelming forces of nature under similar circumstances will appreciate the disappointment of these men, who returned only when their supplies gave out.

It was at this juncture that the people of Inyo county rallied to the support of the project, and the Supervisors appropriated the sum of $200 to enable the trail builders to complete their work. Marsh was chosen to lead the second party, and although late in the season he started up with fifteen men, of whom seven deserted during the first few days. It was late in October, and at an elevation of two miles and a half the wind was bitterly cold, as it surged savagely around the dizzy cliffs. Sleet and icy rain beat down upon them, while avalanches would repeatedly obliterate their new-made trail. The climbing trail was treacherous, and when the men would blast a bowlder out of their path they would see, to their dismay, tons of rough angular rocks roll down into their path. It was heartbreaking work lifting these heavy masses, thousands and thousands of them, when the rarefied air of this high altitude made physical effort most fatiguing.

#3

Although the thin atmosphere produced violent headaches and afflicted them with nausea, they nevertheless toiled on and upward. A huge barrier of ice and snow they bridged by throwing dirt and gravel upon its surface and packing it down until animals could pass over it in safety. In places it was necessary to blast through jutting ledges and the overhanging ramparts rang with the roar of the detonating dynamite. They buttressed the downward side of the trail with dovetailing bowlders of granite and lava and crammed the crevices with fragments of rubble until the footing was secure for the pack-laden horses and mules. Finally, on October 30th a blinding snowstorm proved the last straw. All day long they toiled with dogged desperation, despite the fact that they could barely distinguish one another, so thick and fast fell the flakes. After a long and bitter night, exposed to the fury of the storm, without a tent for shelter, they realized that they would be snowed in hopelessly if they lingered, and with the dawn they cached their tools and returned to Lone Pine, bitterly disappointed, but not discouraged.

"ONCE MORE UNTO THE BREACH."

Winter descended with all its rigors upon Mount Whitney, but the builders of the trail were far from hibernating down in the pleasant valley of the Owens. Three hundred dollars were required to complete the trail and the ladies of Lone Pine came to the front with the tidy sum of $89 netted from a basket social and dance, while the neighboring towns of Independence and Keeler contributed the generous sums of $85 and $67 respectively. Other residents of Inyo swelled the fund with hard-earned coin at considerable personal sacrifice in some cases, while many proffered their labor for a number of days for the common good of their county.

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On July 8, 1904, the third expedition went to the front in the best of spirits and with the determination to win. Its members found the trail in excellent condition until they reached Mexican Camp, their base of supplies, 12,000 feet above the sea. Here their troubles began, and their animals broke through the snow. It became necessary to shovel a trench for 300 yards through the deep drift until they could lead the animals up to Lone Pine pass. In many places they were obliged to carry the packs on their own backs in order to encourage the skeptical and pessimistic mules. Firewood was carried up to a new camp at the elevation of 13,552 feet. From this point upward for the remaining thousand feet the men vied with one another to complete their allotted strips first. In the van proceeded the drillers, who blasted their way round hitherto impassable cliffs. When within but a few hundred yards of the summit they came upon a chasm which it seemed no human foot could cross. "We're done beat now for sure," the men groand when they beheld the precipitous cliff, but Marsh only smiled and set the dynamite to work reducing the angle of the cliff until the gap was bridged with debris. At last, on the 17th of July, the builders of the trail had finished their work, and with a cheer the first pack train trampled the flat roof of Whitney. The packs consisted of pitch pine, rock[illegible] and dynamite, and that night the watchers down in Lone Pine saw their beloved mountain transformed into a vulcano, as the signal fire flamed from its crest and the salvos of dynamite rumbled down the gorges.

THEN THE OBSERVATORY.

For four years the trail served the worthy purpose of attracting increasing numbers of mountain lovers to Lone Pine. They ascended its scenic and sinuous curves past roaring cataracts to the placid Lone Pine and Mirror lakes, where gamy trout abide and abound. Government scientists scale the summit from its now most accessible side, and determined its exact elevation to be 14,501 feet. In the summer of 1903 Mr. Marsh took Professors Abbot and Campbell, directors of the Mount Wilson and Lick observatories respectively, up to the summit of Mount Whitney on a tour of investigation. They were strongly impressed with the flat roof of the mountain as a splendid site for an observatory, and found the conditions of dry and clear atmosphere most favorable to important research work. In 1881 Professor Langley, the father of the aeroplane, camped for a number of weeks 3000 feet below the summit, conducting a series of experiments which enabled him to calculate the solar constant, or the total amount of heat the earth would receive from the sun if the atmosphere did not absorb a large percentage of its radiant energy.

Fifteen years ago Dr. Campbell had visited Mount Whitney and, realizing that its crest was above four-fifths of the moisture in the earth's atmosphere, he foresaw the value to science of a series of spectrographic photographs, which would determine the amount of water vapor in the atmosphere of our neighbor planets, particularly Mars.

During all these years he warmly indorsed the project of establishing a shelter on this mountain top, where scientists may place their delicate apparatus and study the unsolved problems of astronomy, astro-physics, meteorology, biology and other kindred subjects. Now that the public-spirited people of Lone Pine had demonstrated the practicability of transporting building materials, supplies of all kinds and even the most delicate instruments with comparative safety to this lofty look-out ledge, the way was paved for the planning of the observatory that would crown their efforts with success. Dr. Abbot, representing the Smithsonian Institution, informed Mr. Marsh that a fund would be appropriated for this purpose if he would assure the officials in Washington that the trail would be put in first-class condition. Mr. Marsh agreed to his part, and secured as the lowest bidder, the contract for packing some fourteen tons of cement, sand, steel, glass and other supplies to the summit during the ensuing summer.

BUILDING THE OBSERVATORY.

Five winters had wrapped white blankets around the frost-sculptured form of Whitney. Avalanches and storms had played ninepins with the trail, and once more the call for contributions came to the good people of Lone Pine and its altruistic neighbors. Again the ladies of Lone Pine came to the front with their choicest cakes, pies and other toothsome temptations. They served a savory supper after a merry dance, a happy combination which proved the event of the season. The population of Lone Pine is but 350, yet they cleared $130 that evening by charging the moderate rate of $1 50 a couple. The lemonade stand proved a bonanza, for its clean-up was just $13 90, while Independence and Keeler once more added their quota.

On the 18th of last July Marsh attacked the snow drifts above the timber line with a force of men, who with axes and grubbing-hoes hewed a path for the pack train to follow. For two days following the party was crippled with snow blindness, the torture of which is most excruciating; yet with [illegible] still labored on until the arrival of colored glasses relieved their torment. At 13,550 feet they were obliged to build a quarter of a mile of new trail in order to wind around a field of soft snow, while the work of reconstructing the old way required the frequent use of dynamite. Blinding headaches, extreme exhaustion resulting from hard manual labor in such rarefied air, all these were their daily portion. Once more the funds gave out and an increasing demand for labor down in the valley lured some of the men from the heights. A few, however, remained with Marsh to the last, when, on the 28th of July, the nimble-footed mules finally stood silhouetted against the indigo sky that hangs seemingly close to the summit.

As soon as the long-eared collaborators were relieved of their burders, the foundation was commenced. A camp was established in a sheltered cranny where a supply of firewood accumulated. Snow was melted on pieces of sheetiron roofing and the water used to mix with cement. Walls of reenforced concrete rose rapidly upward. Then came a terrifying thunderstorm, and Marsh was deserted by the last of his men. Alone on the summit he set his teeth and with unflinching grit decided to complete the observatory single handed, but after two days his helpers returned and finished their work. On the 29th of last August, this pioneer building was ready to serve its purpose as a shelter for scientific expeditions. It is thirty feet in length, twelve in width and ten in height, and is divided into three rooms, one of which will remain unlocked as "a shelter in the time of storm" for the accommodation of tourists. It is hoped that this favor will be appreciated by all who may seek refuge in this life-saving station on the peak, where decades ago John Muir danced all night to keep from freezing.

An expedition from Lick Observatory was financed last August by a Regent of the University of California, and Dr. W. W. Campbell was chosen to lead the party, which comsisted of several from Mount Hamilton, Dr. Miller of San Jose and Professor MacAdie of the Weather Bureau. The party left Lone Pine on August 28th, and after spending two days at Lone Pine lake in order to become acclimated to the altitude, they joined Dr. Abbot, the director of the Smithsonian Institution Observatory, whom they found engaged in a remarkably thorough study of the intensity of the solar radiation.

Dr. Campbell transported a sixteen-inch horizontal-reflecting telescope with spectroscopic attachments, with which he made certain discoveries of great astronomical importance. He demonstrated the absence of water-vapor in appreciable quantities in the atmosphere of Mars by means of photographing its spectrum. Had water been present to the slightest extent, the solar rays passing through the atmosphere of Mars and being reflected to the earth would have shown a distant dark band on the photographic plate. Only the faintest vapor band was revealed by the spectroscope in the analysis of the light rays traversing the Martian atmosphere, and even this could be attributed to the small percentage of moisture in the atmosphere of our earth still suspended above the summit of Whitney. The result of this discovery would tend to refute the canal theory of Schiaparelli and those of the yellow journal scientific contributors, who still maintain that life, such as we know, exists in a waterless atmosphere.

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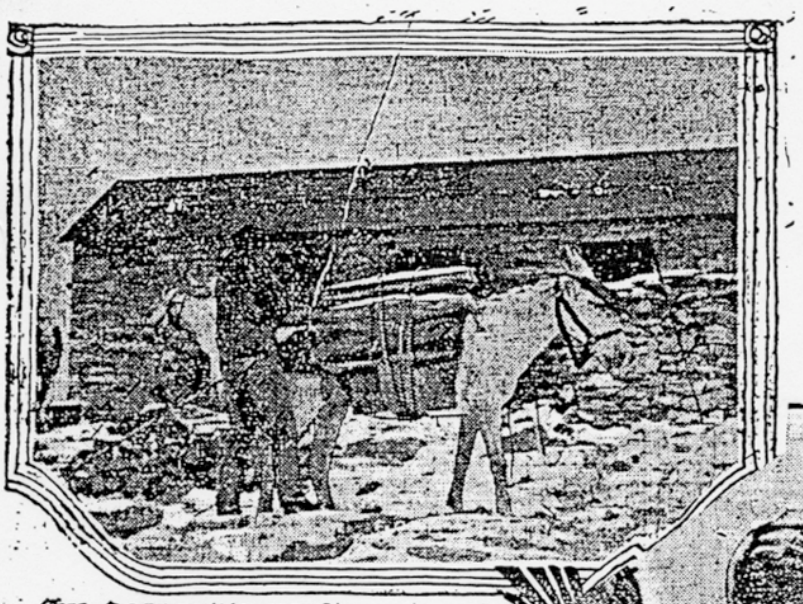
FUTURE SCOPE OF OBSERVATORY.

Professor MacAdie, the meteorologist who accompanied the Campbell party, was one of the first and most ardent advocates of Mount Whitney as an observatory site, because of its accessibility, clear sky and its elevation above the water vapor of lower levels. On his recent visit he spent seven nights on the summit where he studied the phenomena of the upper air from a most favorable vantage point. As a meteorological station where the laws of storms may be studied and the changes of temperature and barometric pressure may be better understood, Mount Whitney will add greatly to the knowledge of a devoted corps of Government scientists who desire to apply the facts they will learn to the daily needs of the farmer folk down in the valleys below. The observatory will doubtless attract the more progressive men of science who will take advantage of its opportunities for research work along the lines of their respective specialties, and in the course of the next few years it will probably be enlarged to accommodate the pilgrims to this mountain-Mecca.

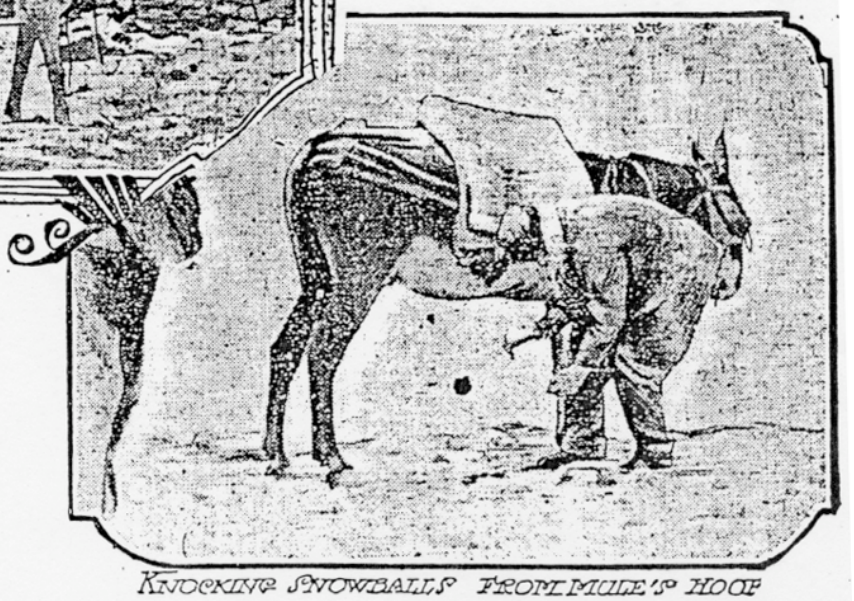
WHAT WHITNEY OVERLOOKS.

One can never imagine the majesty of this mountain until he sees with his own eyes the grandeur of the sunrise. Six thousand feet sheer the titanic fault scarp falls away to the dun and drab foothills at its base. Grotesque pinnacles and the eerie and wierdly-carved crags burn red above the spotless whiteness of the snowfields. Below for a hundred miles the Owens' valley drains into its saline sea. Its floor, however, is a green oasis, where the magic touch of water is transforming 1000 square miles of grazing land into highly productive orchards and vineyards. The raisin grape is becoming a popular favorite among these ranchers of Inyo, whose dry climate guarantees the successful curing of the sugary crop. Half-way up the savage saw-toothed slopes the eagle soars over forests of fox-tail pine and shaggy tamaracks, and sees his image reflected in countless crystal lakes whose foaming outlets are ordained to turn the wheels of future industries.

Beyond the green gladness of the Owens vale, the mineralized Inyo mountains swell, and over them still the painted Panamints pierce the sky over toward the great mysterious desert, where stretch the sunken sandy wastes of Death valley seventy fathoms below the level of Balboa's sea.



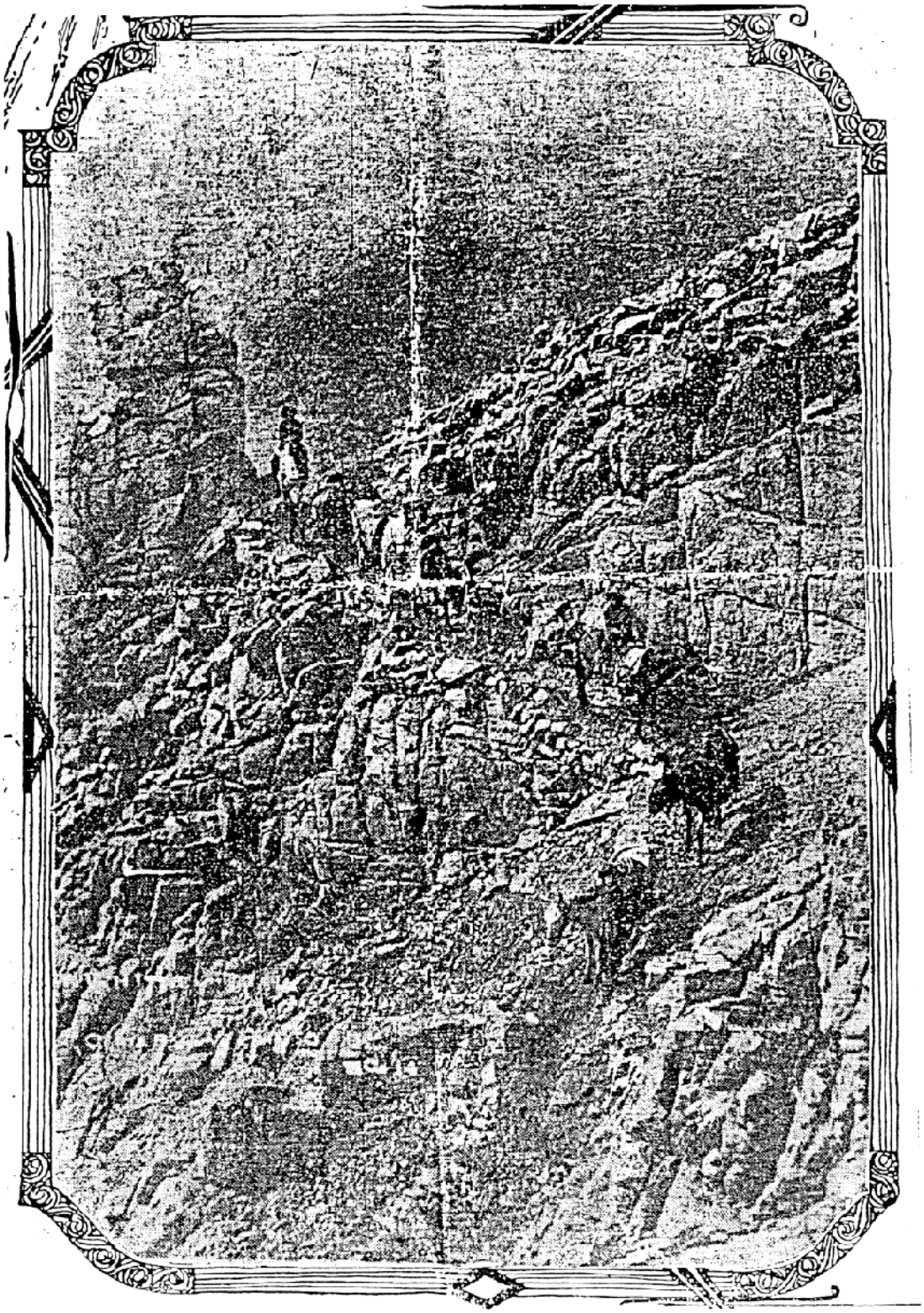
THE OBSERVATORY ON MT. WHITNEY ELEVATION 14.502 FEET



KNOCKING SNOWBALLS FROM MULE'S HOOF

Appendix A

SAN FRANCISCO CHRONICLE , SUNDAY, NOVEMBER 7, 1909



MT. WHITNEY TRAIL

Appendix A

SAN FRANCISCO CHRONICLE , SUNDAY, NOVEMBER 7, 1909

GARBLED LINES CLARIFIED

The copy in Gustave F. Marsh's records has garbled lines due to creases existing from 1909. However, a microfilm copy found in the Long Beach California State University Library was whole. The garbled lines are identified on the copy and the complete lines are shown below.

Item #1: It is a great credit to the Smithsonian Institution and to the superintendent of the construction, G. F. Marsh, a public-spirited citizen of Lone Pine, who struggled, valiantly and successfully against the difficulties of transporting cement and steel to the summit, as well as difficulties of less open character. Marsh's connection with the project is one in which he is entitled to feel the utmost pride, and I trust that his fellow citizens of Lone Pine and Inyo County will appreciate his services in this connection.

Item #2: Then new blood revived these isolated towns of Inyo, and, following certain enterprising newcomers, came a railroad which will soon carry out the produce of Owens Valley.

Item #3: Sleet and icy rain beat down upon them, while avalanches would repeatedly obliterate their new-made trail. The sliding talus was treacherous, and when the men would blast a bowlder out of their path they would see, to their dismay, tons of rough angular rocks roll down into their path.

Item #4: The packs consisted of pitch pine, rockets, and dynamite, and that night the watchers down in Lone Pine saw their beloved mountain transformed into a volcano, as the signal fire flamed from its crest and the salvos of dynamite rumbled down the gorges.

Item #5: For two days following the party was crippled with snow blindness, the torture of which is most excruciating; yet with masks made from gunny saks the men still labored on until the arrival of colored glasses relieved their torment.

Item #6: As a meteorological station where the laws of storms may be studied and the changes of temperature and barometric pressure may be better understood.

Appendix A

SAN FRANCISCO CHRONICLE , SUNDAY, NOVEMBER 7, 1909

THE HIGHEST HOUSE IN AMERICA

The retyped version

Cemented to a granite foundation, 14,501 feet above sea level, a class A, fire and earthquake proof structure of stone and steel now crowns the crest of Mount Whitney, the highest point in the United States. The observatory was constructed late last August by the Smithsonian Institution, represented by Dr. Abbot, director of the Mount Wilson observatory, with the co-operation of Professor Alexander G. MacAdie of the United States Weather Bureau and Dr. Campbell, director of Lick Observatory. Concerning it, the latter of these noted men of science says: It is a great credit to the Smithsonian Institution and to the superintendent of the construction, G. F. Marsh, a public-spirited citizen of Lone Pine, who struggled, valiantly and successfully against the difficulties of transporting cement and steel to the summit, as well as difficulties of less open character. Marsh's connection with the project is one in which he is entitled to feel the utmost pride, and I trust that his fellow citizens of Lone Pine and Inyo County will appreciate his services in this connection.

Important as is the scientific value of this unique observatory, its deeper human interest lies in the heroic efforts of the men who blazed the trail. Indeed, the building of this citadel of science might have been indefinitely deferred were it not for the perseverance of a man with a high ideal. For eight long, discouraging years his fixed purpose of life was to accomplish the erection of an observatory on the summit of Mount Whitney, having the faith and foresight to realize what a great advantage such an attraction would be to his community, for whose betterment he labored. With a few resolute companions, he struggled with the elements far up that savage Sierran scarp, and by his force of character overcame the more insidious obstacles of jealousy and doubt which beset his path below. How these men of tried steel hewed their way through barriers of granite and ice, is a story for the pen of a Kipling to relate. Readers of realistic fiction who have reveled in The Bridge Builders or Caleb West, Master Diver, would find the facts regarding the building of the Lone Pine trail and the dream of the observatory fulfilled a volume of even more tensely thrilling interest.

PEOPLE OF LONE PINE PAVE WAY.

An eagle soaring from the summit of Mount Whitney toward the sunrise fourteen miles in an air line would glance nearly eleven thousand feet directly down upon the little town of Lone Pine. For more than a third of a century it has slumbered peacefully in the secluded valley of the Owens River, which skirts the eastern foothills of the Sierra for 100 miles down to the dead sea of California, Owens Lake. Then new blood revived these isolated towns of Inyo, and, following certain enterprising newcomers, came a railroad which will soon carry out the produce of Owens Valley. Twenty streams pouring forth from the Sierran snowfields are now being harnessed for the generation of more than 100,000 horse-power, while the water is being diverted to the rich valley soil with a degree of success that is repeating the history of irrigation in Southern California. Among these desirable citizens came an Englishman, Gustave F. Marsh, who, after investigating the opportunities of other districts of the awakening West, decided to share in the development of Inyo County.

He located in Lone Pine, and eight years ago joined with other progressive residents of Inyo County in agitating a popular sentiment in favor of building a pack trail to the summit of the mountain. With few exceptions the people of Lone Pine perceived that the construction of a safe trail up Mount Whitney would attract scientists to the summit, and that their influence might induce the Government to establish an observatory there, which would naturally bring their town into prominence. In August, 1903, Messrs.

Spears, Cross and Spears, together with the photographer, Harvey, returned from a reconnoitering trip over the proposed route. Their reports were so favorable that the sum of $700 was promptly subscribed for the purpose of outfitting a party of fourteen, who, under the direction of Mr. Spears, constructed the trail up through the foaming canyon of Lone Pine creek, past the picturesque Lake of the Lonesome Pine to the pass of the same romantic name at an elevation of 13,000 feet. Although within three and one-half miles of the summit, the pioneer party was compelled to abandon the work because the funds had become exhausted.

The heroic and herculean task of carving a course, through granite ice and avalanche-accumulating slide rock was far more difficult and expensive than bargained for, and all who have struggled with the overwhelming forces of nature under similar circumstances will appreciate the disappointment of these men, who returned only when their supplies gave out.

It was at this juncture that the people of Inyo County rallied to the support of the project, and the Supervisors appropriated the sum of $200 to enable the trail builders to complete their work. Marsh was chosen to lead the second party, and although late in the season he started up with fifteen men, of whom seven deserted during the first few days. It was late in October, and at an elevation of two miles and a half the wind was bitterly cold, as it surged savagely around the dizzy cliffs. Sleet and icy rain beat down upon them, while avalanches would repeatedly obliterate their new-made trail. The sliding talus was treacherous, and when the men would blast a bowlder out of their path they would see, to their dismay, tons of rough angular rocks roll down into their path. It was heartbreaking work lifting these heavy masses, thousands and thousands of them, when the rarefied air of this high altitude made physical effort most fatiguing.

Although the thin atmosphere produced violent headaches and afflicted them with nausea, they nevertheless toiled on and upward. A huge barrier of ice and snow they bridged by throwing dirt and gravel upon its surface and packing it down until animals could pass over it in safety. In places it was necessary to blast through jutting ledges and the overhanging ramparts rang with the roar of the detonating dynamite. They buttressed the downward side of the trail with dovetailing bowlders of granite and lava and crammed the crevices with fragments of rubble until the footing was secure for the pack-laden horses and mules. Finally, on October 30th a blinding snowstorm proved the last straw. All day long they toiled with dogged desperation, despite the fact that they could barely distinguish one another, so thick and fast fell the flakes. After a long and bitter night, exposed to the fury of the storm, without a tent for shelter, they realized that they would be snowed in hopelessly if they lingered, and with the dawn they cached their tools and returned to Lone Pine, bitterly disappointed, but not discouraged.

"ONCE MORE UNTO THE BREACH."

Winter descended with all its rigors upon Mount Whitney, but the builders of the trail were far from hibernating down in the pleasant valley of the Owens. Three hundred dollars were required to complete the trail and the ladies of Lone Pine came to the front with the tidy sum of $69 netted from a basket social and dance, while the neighboring towns of Independence and Keeler contributed the generous sums of $85 and $67 respectively. Other residents of Inyo swelled the fund with hard-earned coin at considerable personal sacrifice in some cases, while many proffered their labor for a number of days for the common good of their county.

On July 8, 1904, the third expedition went to the front in the best of spirits and with the determination to win. Its members found the trail in excellent condition until they reached Mexican Camp, their base of supplies, 12,000 feet above the sea. Here their troubles began, and their animals broke through the snow. It became necessary to shovel a trench for 300 yards through the deep drift until they could lead the animals up to Lone Pine pass. In many places they were obliged to carry the packs on their own backs in order to

encourage the skeptical and pessimistic mules. Firewood was carried up to a new camp at the elevation of 13,552 feet. From this point upward for the remaining thousand feet the men vied with one another to complete their allotted strips first. In the van proceeded the drillers, who blasted their way round hitherto impassable cliffs. When within but a few hundred yards of the summit they came upon a chasm which it seemed no human foot could cross. "We're done beat now for sure," the men groaned when they beheld the precipitous cliff, but Marsh only smiled and set the dynamite to work reducing the angle of the cliff until the gap was bridged with debris. At last, on the 17th of July, the builders of the trail had finished their work, and with a cheer the first pack train trampled the flat roof of Whitney. The packs consisted of pitch pine, rockets, and dynamite, and that night the watchers down in Lone Pine saw their beloved mountain transformed into a volcano, as the signal fire flamed from its crest and the salvos of dynamite rumbled down the gorges.

THEN THE OBSERVATORY.

For four years the trail served the worthy purpose of attracting increasing numbers of mountain lovers to Lone Pine. They ascended its scenic and sinuous curves past roaring cataracts to the placid Lone Pine and Mirror lakes, where gamy trout abide and abound. Government scientists scaled the summit from its now most accessible side, and determined its exact elevation to be 14,501 feet. In the summer of 1908 Mr. Marsh took Professors Abbot and Campbell, directors of the Mount Wilson and Lick observatories respectively, up to the summit of Mount Whitney on a tour of investigation. They were strongly impressed with the flat roof of the mountain as a splendid site for an observatory, and found the conditions of dry and clear atmosphere most favorable to important research work. In 1881 Professor Langley, the father of the aeroplane, camped for a number of weeks 3000 feet below the summit, conducting a series of experiments which enabled him to calculate the solar constant, or the total amount of heat the earth would receive from the sun if the atmosphere did not absorb a large percentage of its radiant energy.

Fifteen years ago Dr. Campbell had visited Mount Whitney and, realizing that its crest was above four-fifths of the moisture in the earth's atmosphere, he foresaw the value to science of a series of spectrographic photographs, which would determine the amount of water vapor in the atmosphere of our neighbor planets, particularly Mars. During all these years he warmly indorsed the project of establishing a shelter on this mountain top, where scientists may place their delicate apparatus and study the unsolved problems of astronomy, astro-physics, meteorology, biology and other kindred subjects. Now that the public-spirited people of Lone Pine had demonstrated the practicability of transporting building materials, supplies of all kinds and even the most delicate instruments with comparative safety to this lofty look-out ledge, the way was paved for the planning of the observatory that would crown their efforts with success. Dr. Abbot, representing the Smithsonian Institution, informed Mr. Marsh that a fund would be appropriated for this purpose if he would assure the officials in Washington that the trail would be put in first-class condition. Mr. Marsh agreed to his part, and secured, as the lowest bidder, the contract for packing some fourteen tons of cement, sand, steel, glass and other supplies to the summit during the ensuing summer.

BUILDING THE OBSERVATORY.

Five winters had wrapped white blankets around the frost-sculptured form of Whitney. Avalanches and storms had played ninepins with the trail, and once more the call for contributions came to the good people of Lone Pine and its altruistic neighbors. Again the ladies of Lone Pine came to the front with their choicest cakes, pies and other toothsome temptations. They served a savory supper after a merry dance, a happy combination which proved the event of the season. The population of Lone Pine is but 350, yet they cleared $130 that evening by charging the moderate rate of $1.50 a couple. The lemonade stand proved a bonanza, for its clean-up was just $13.90, while Independence and Keeler once more added their quota.

On the 18th of last July Marsh attacked the snow drifts above the timber line with a force of men, who with axes and grubbing-hoes hewed a path for the pack train to follow. For two days following the party was crippled with snow blindness, the torture of which is most excruciating; yet with masks made from gunny saks the men still labored on until the arrival of colored glasses relieved their torment. At 13,550 feet they were obliged to build a quarter of a mile of new trail in order to wind around a field of soft snow, while the work of reconstructing the old way required the frequent use of dynamite. Blinding headaches, extreme exhaustion resulting from hard manual labor in such rarefied air, all these were their daily portion. Once more the funds gave out and an increasing demand for labor down in the valley lured some of the men from the heights. A few, however, remained with Marsh to the last, when, on the 28th of July, the nimble-footed mules finally stood silhouetted against the indigo sky that hangs seemingly close to the summit.

As soon as the long-eared collaborators were relieved of their burdens, the foundation was commenced. A camp was established in a sheltered cranny where a supply of firewood accumulated. Snow was melted on pieces of sheetiron roofing and the water used to mix with cement. Walls of re-enforced concrete rose rapidly upward. Then came a terrifying thunderstorm, and Marsh was deserted by the last of his men. Alone on the summit he set his teeth and with unflinching grit decided to complete the observatory single handed, but after two days his helpers returned and finished their work. On the 29th of last August, this pioneer building was ready to serve its purpose as a shelter for scientific expeditions. It is thirty feet in length, twelve in width and ten in height, and is divided into three rooms, one of which will remain unlocked as “a shelter in the time of storm” for the accommodation of tourists. It is hoped that this favor will be appreciated by all who may seek refuge in this life-saving station on the peak, where decades ago John Muir danced all night to keep from freezing.

An expedition from Lick Observatory was financed last August by a Regent of the University of California, and Dr. W. W. Campbell was chosen to lead the part, which consisted of several from Mount Hamilton, Dr. Miller of San Jose and Professor MacAdie of the Weather Bureau. The party left Lone Pine on August 28th, and after spending two days at Lone Pine lake in order to become acclimated to the altitude, they joined Dr. Abbot, the director of the Smithsonian Institution Observatory, whom they found engaged in a remarkably thorough study of the intensity of the solar radiation.

Dr. Campbell transported a sixteen-inch horizontal-reflecting telescope with spectroscopic attachments, with which he made certain discoveries of great astronomical importance. He demonstrated the absence of water vapor in appreciable quantities in the atmosphere of Mars by means of photographing its spectrum. Had water been present to the slightest extent, the solar rays passing through the atmosphere of Mars and being reflected to the earth would have shown a distant dark band on the photographic plate. Only the faintest vapor band was revealed by the spectroscope in the analysis of the light rays traversing the Martian atmosphere, and even this could be attributed to the small percentage of moisture in the atmosphere of our earth still suspended above the summit of Whitney. The result of this discovery would tend to refute the canal theory of Schiaparelli and those of the yellow journal scientific contributors, who still maintain that life, such as we know, exists in a waterless atmosphere.

FUTURE SCOPE OF OBSERVATORY.

Professor MacAdie, the meteorologist who accompanied the Campbell party, was one of the first and most ardent advocates of Mount Whitney as an observatory site, because of its accessibility, clear sky and its elevation above the water vapor of lower levels. On his recent visit he spent seven nights on the summit where he studied the phenomena of the upper air from a most favorable vantage point. As a meteorological station where the laws of storms may be studied and the changes of temperature and barometric pressure

may be better understood. Mount Whitney will add greatly to the knowledge of a devoted corps of Government scientists who desire to apply the facts they will learn to the daily needs of the farmer folk down in the valleys below. The observatory will doubtless attract the more progressive men of science who will take advantage of its opportunities for research work along the lines of their respective specialties, and in the course of the next few years it will probably be enlarged to accommodate the pilgrims to this mountain-Mecca.

WHAT WHITNEY OVERLOOKS.

One can never imagine the majesty of this mountain until he sees with his own eyes the grandeur of the sunrise. Six thousand feet sheer, the titanic fault scarp falls away to the dun and drab foothills at its base. Grotesque pinnacles and the eerie and wierdly-carved crags burn red above the spotless whiteness of the snowfields. Below for a hundred miles the Owens' valley drains into its saline sea. Its floor, however, is a green oasis, where the magic touch of water is transforming 1000 square miles of grazing land into highly productive orchards and vineyards. The raisin grape is becoming a popular favorite among these ranchers of Inyo, whose dry climate guarantees the successful curing of the sugary crop. Half-way up the savage saw-toothed slopes the eagle soars over forests of fox-tail pine and shaggy tamaracks, and sees his image reflected in countless crystal lakes whose foaming outlets are ordained to turn the wheels of future industries.

Beyond the green gladness of the Owens vale, the mineralized Inyo mountains swell, and over them still the painted Panamints pierce the sky over toward the great mysterious desert, where stretch the sunken sandy wastes of Death Valley seventy fathoms below the level of Balboa's sea.

The copy of this article in Gustave F. Marsh's records has missing lines in the creases existing since 1909. However, I found a microfilm copy in the California State University Long Beach Library and was able to fill in the missing lines. The above copy is as true as I could make it without the graphics. George F. Marsh

Appendix B

A SHELTER FOR OBSERVERS ON MOUNT WHITNEY

by

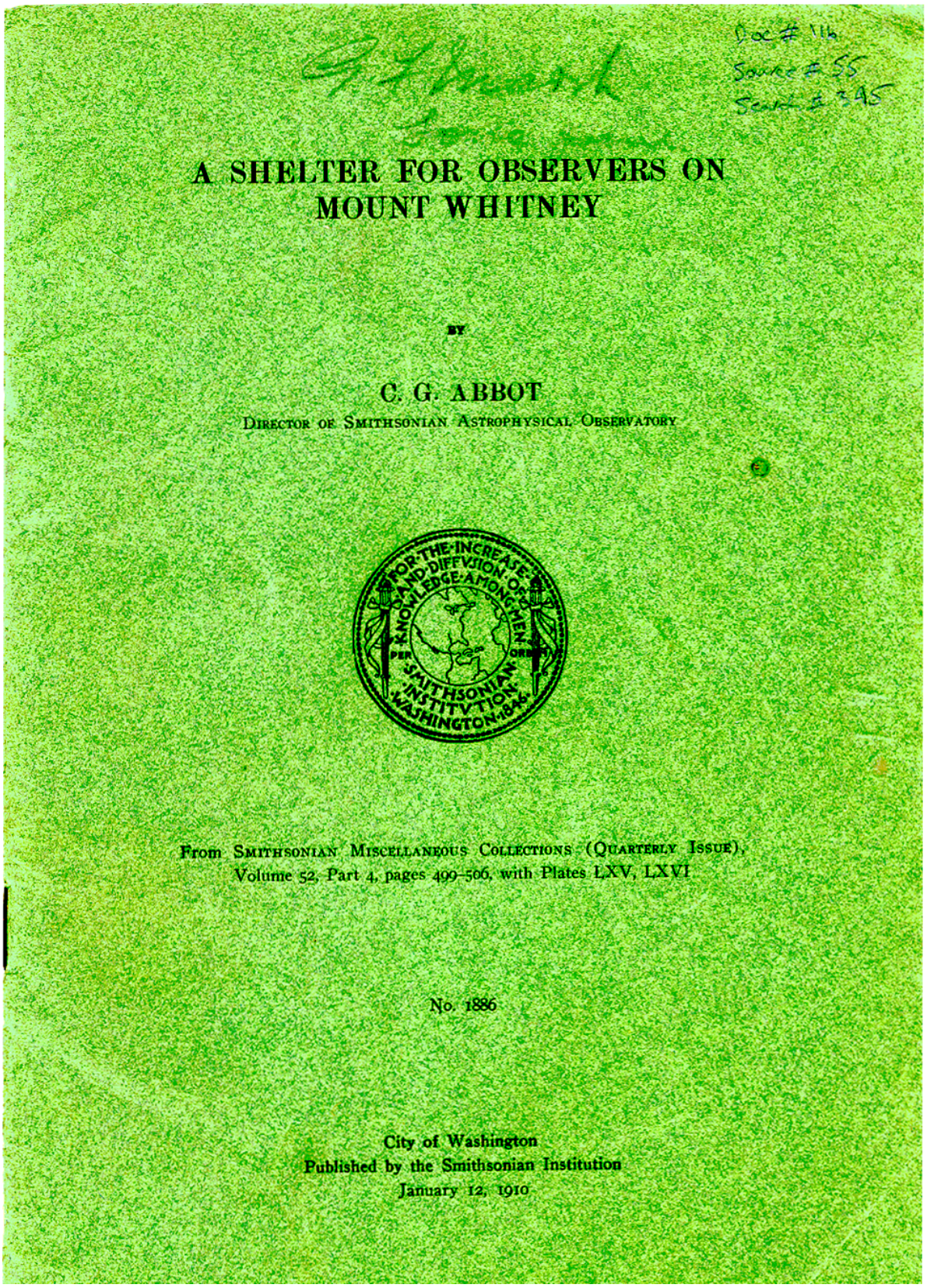
C. G. ABBOT

Director of Smithsonian Astrophysical Observatory

From Smithsonian Miscellaneous Collections (Quarterly Issue),
Volume 52, Part 4, pages 499–506, with Plates LXV, LXVI

No. 1886

City of Washington
Published by the Smithsonian Institution
January 12, 1910



A SHELTER FOR OBSERVERS ON MOUNT WHITNEY

BY

C. G. ABBOT

DIRECTOR OF SMITHSONIAN ASTROPHYSICAL OBSERVATORY

From SMITHSONIAN MISCELLANEOUS COLLECTIONS (QUARTERLY ISSUE),
Volume 52, Part 4, pages 499-506, with Plates LXV, LXVI

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A SHELTER FOR OBSERVERS ON MOUNT WHITNEY

BY C. G. ABBOT

DIRECTOR OF SMITHSONIAN ASTROPHYSICAL OBSERVATORY

WITH TWO PLATES

There have been few American scientific expeditions which have excited more interest here and abroad than Mr. Langley's expedition to Mount Whitney in 1881. It was undertaken to determine the relative transparency of the air at high and low altitudes, and thereby to fix the value of the "solar constant of radiation." If we measure the intensity of sun rays at the earth's surface by wholly absorbing them during a noted time interval over a measured area and expressing the results in heat units, we do not get a true measure of the intensity of the sun's output of radiation, owing to the losses in the air; neither can these losses be allowed for by merely measuring the total radiation at different hours of the day, when different thicknesses of air are traversed, for the losses affect the intensity of rays of different colors differently, and some rays are almost wholly cut off in the upper air, so that they cannot be estimated in any easy manner. Langley recognized the necessity of measuring the intensities of rays of all wave-lengths separately, and acted upon his discovery by employing the bolometer (a highly sensitive electrical thermometer) to measure in all parts of the solar spectrum. Observations at Allegheny, Pennsylvania, were disappointing, owing to the dusty state of the lower air; hence he formed the plan of going to a high altitude in the then little known West with the complete complex outfit which he called the spectro-bolometer. His plans called for observations at a low station and, as nearly as possible simultaneously, at a very high station near by. On the advice of those who knew the region, he chose Mount Whitney, in the Sierra Nevada range, since shown to be the highest peak in the United States (proper), for his high station, and Lone Pine, in the Owens Valley, only about 15 miles distant, as the lower one. Mount Whitney has an elevation of 14,502 feet; Lone Pine, only 3,850 feet.

Mr. Langley's expedition was not lacking in features of interest and picturesqueness, apart from its highly valuable scientific aims. It was financed by the late William Thaw, of Pittsburg, a man who supported Langley's work on many occasions, but always stipulated

that his name should not appear in the published acknowledgments. The expedition was carried on and its results published under the auspices of the Signal Service of the United States Army, and a detail of Signal Service officers assisted in the observations. The Pennsylvania Railroad provided a private car, which was furnished free transportation to San Francisco by the Pennsylvania, Union Pacific, and Central Pacific railroads. A military escort was provided from San Francisco to Mount Whitney. The expedition traversed the Mojave desert in August on the way to Lone Pine, certainly a novel experience for Easterners. It is unquestionable that the success achieved was due in no small measure to the presence of the late Mr. Keeler, afterwards the discoverer of the nature of the rings of Saturn, and always distinguished for his wonderful skill and resourcefulness in observation, as well as for his charming personality. The traditions of the expedition, including the story of the Dutch oven, the swim in the icy lake, the attendance at the dance, were ever interesting when heard from Keeler's lips.

Langley found it impracticable to carry his spectro-bolometer to the summit of Mount Whitney, and contented himself with observing at "Mountain Camp," now known as "Langley's Camp," on the west side of Mount Whitney, at an elevation of 11,700 feet. The results obtained on the expedition were of great value, but, unfortunately, for 25 years they retarded rather than aided the progress of science, because Langley erred in his theoretical construction of them, and set the value of the solar constant at 3.0 calories per square centimeter per minute rather than 2.1, which his observations give when rightly reduced. On his return to the East he recommended that Mount Whitney be reserved by the Government as a favorable site for a high-altitude observatory, and his recommendations were favorably acted upon. Mount Whitney is now included in the Sequoia National Forest.

We now pass to the steps which led to the actual occupation of the summit of Mount Whitney for observing purposes. The expedition of Langley ascended by a circuitous route from Lone Pine, which occupied several days' time and led by a discouraging series of ups and downs to Mountain Camp. Farther advance by that route with animals was then impossible and is so still. In 1904 the citizens of Lone Pine and vicinity, under the leadership of Mr. G. F. Marsh, built a trail to the summit of Mount Whitney, directly up Lone Pine Cañon, over a pass at 13,400 feet, and thence as high as possible on the west side of the range, over a waste of granite rocks of all sizes, to the very summit of the mountain. Funds were scanty,

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A SHELTER FOR OBSERVERS ON MOUNT WHITNEY

and it was only by the greatest economy, pluck, and perseverance that Mr. Marsh succeeded in getting his trail to the top. To an Easterner it is hardly a trail even now, and even Mr. Marsh said to the writer on our last descent that he hardly saw how the mules could go over it, unless they had hooks on their hind feet to hang on by till they found a place for their fore feet. There are places where, with almost precipitous descent staring them in the face, the mules must step down as far as from a high desk to the floor, landing on jagged rocks, not on dirt or sand. However, they do go over the trail, and in the transportation this year of upwards of 20,000 pounds of material and apparatus for the Smithsonian Institution not a mule was lost or seriously hurt and no material was even injured, thanks to the skill of the packers, especially Mr. Horace Elder. The west slope of the ridge leading to Mount Whitney is extremely rough and broken throughout. Pinnacles of naked rock rise often nearly vertically, and are crossed both vertically and horizontally by seams and cracks in such a manner as to give the impression of being a very crazy, crumbling, insecure structure, likely to be shaken down if a great earthquake should come. Indeed the whole slope is covered, clear to "Langley's Meadow," with rocks of all sizes which have broken off and rolled down. It was through this difficult country that the Lone Pine citizens built their trail. In some places, where they could only proceed by blasting, the rock was too crumbling to be drilled, so that the powder charge had to be tamped into a crack between rocks, and when exploded would bring down a slide from above sufficient to fill all the space cleared by the blast, and all would have to be done over again and again. It reflects very high credit on Mr. Marsh and his supporters that the trail was ever completed.

To Director W. W. Campbell, of the Lick Observatory, is due the credit of initiating plans for a shelter on Mount Whitney. The following account is from a recent note by him "On the spectrum of Mars" in Publications of the Astronomical Society of the Pacific (vol. XXI, No. 128, October, 1909, pages 201-2).

"When the spectrum of Mars was under observation extensively at Mount Hamilton in 1894, for the purpose of detecting the presence of water vapor in that planet's atmosphere, I realized that the water vapor in the earth's atmosphere was and is the great obstacle in the way of success, and I then resolved to observe the spectrum of Mars from the summit of Mount Whitney, the highest point of land in the United States, when the planet should again come into a position favorable for the purpose. This would occur in August-

A SHELTER FOR OBSERVERS ON MOUNT WHITNEY

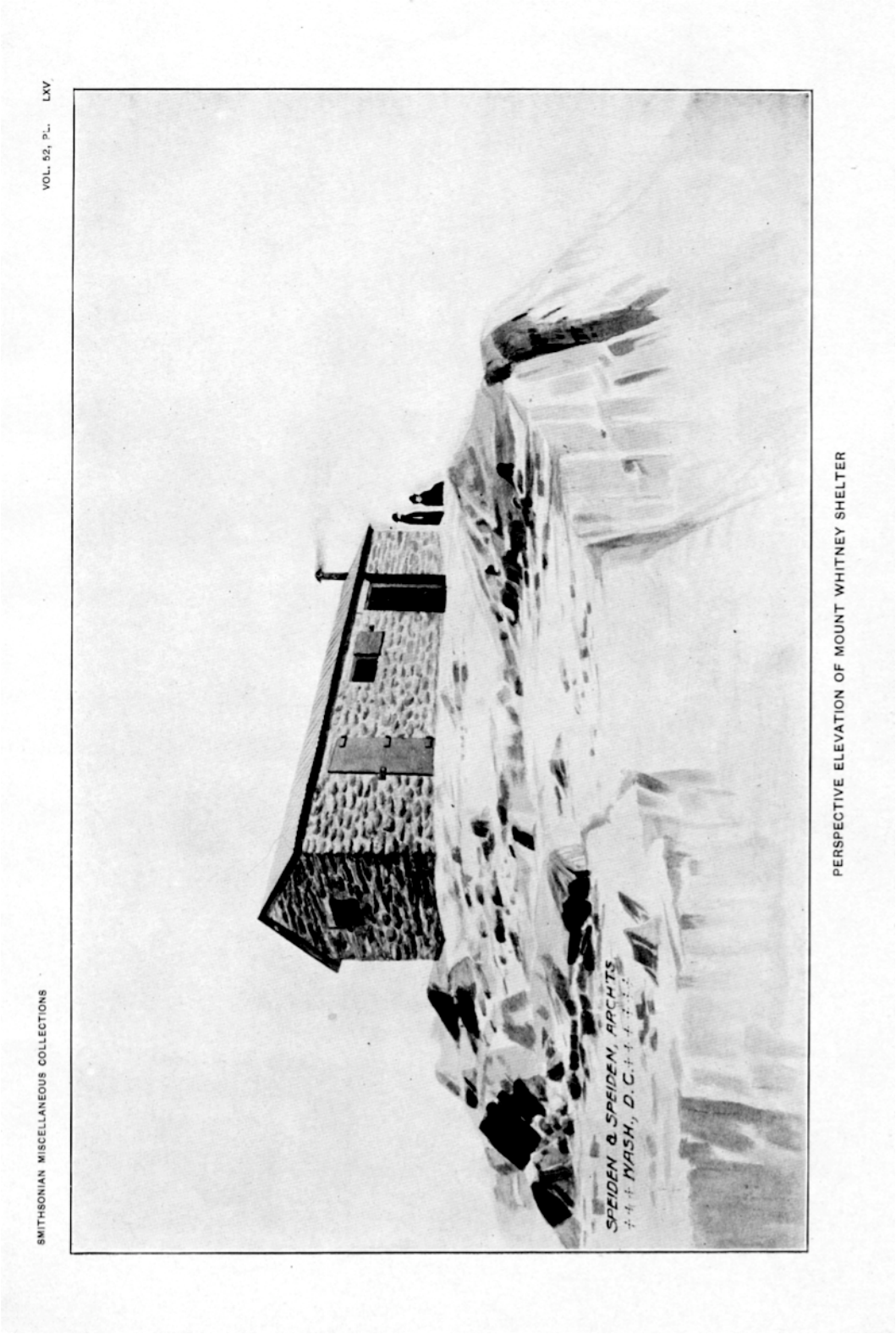
September, 1909, when Mars would be near the earth and high above the horizon, at the time of year when Mount Whitney could be ascended with instruments.

"Late in August, 1908, I ascended Mount Whitney, in order to determine the limiting sizes of instruments which could be transported over the rocky trail on the backs of pack animals, and to plan the living arrangements for the proposed expedition of 1909. I was accompanied by Director C. G. Abbot, of the Smithsonian Institution Observatory, who was interested in the summit of Mount Whitney in connection with high-altitude studies of solar radiation, as Professor Langley's pioneer expedition had been interested in 1881. We remained on the summit through the night of August 24, 1908. The readings of the dry- and wet-bulb thermometers obtained by Director Abbot indicated that the conditions were extremely favorable for the solution of the proposed problem. Before leaving the summit I decided definitely that observations in 1909, requiring a residence of a week or more, should not be undertaken unless a building of some kind could be erected as a shelter in case of storm, and the question of ways and means was discussed. Director Abbot suggested that the purposes of such a building might perhaps come within the scope of the Hodgkins Fund of the Smithsonian Institution. A few weeks later, after receiving my description of a building which would meet the needs of the proposed expedition, he was pleased to present the subject to Dr. C. D. Walcott, Secretary of the Smithsonian Institution, for consideration. Through the Secretary's lively interest an appropriation to provide the building for the shelter of the 1909 and any worthy future expeditions was made."

The sketch and specifications proposed by Director Campbell contemplated a three-room hut with stone walls and steel roof and doors, to be used not primarily as an observatory, although it might be convenient to use a part of it occasionally as a dark-room for photography, but rather as a shelter and living quarters for observers in any branch of science who might apply to the Smithsonian Institution for permission to use the building during the progress of observations. Not only astronomers, but meteorologists, physicists, chemists, geologists, and perhaps botanists, zoologists, and medical men, might desire to make experiments on the top of Mount Whitney. The writer transmitted Director Campbell's plans with a letter of explanation and recommendation to Secretary Walcott, who, on October 30, 1908, approved a grant from the Hodgkins Fund for erecting the proposed shelter on Mount Whitney.

Appendix B

A SHELTER FOR OBSERVERS ON MOUNT WHITNEY



Messrs. Speiden and Speiden, architects, under the writer's instruction, worked up the plans for the structure nearly as contemplated by Director Campbell. Figure 88 and plate LXV give the ground plan and perspective elevation as constructed. Two of the rooms communicate, and are kept locked by the Institution except when in use by authorized observing parties. The third room is accessible to the general public, and will doubtless be very welcome to persons who may be caught by storms or cold blasts on the top of Mount Whitney.

In carrying out the construction Director Campbell offered to act as the Institution's agent in San Francisco to award contracts for steel and cement, and to supervise the construction and actual trial erection in San Francisco of all steel parts. He performed this work

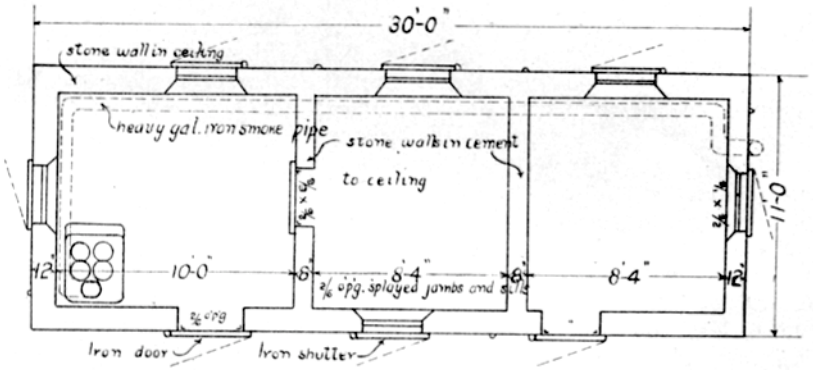


FIG. 88.—Ground plan of Mount Whitney shelter.

with the most conscientious and painstaking care. The charge of the transportation from Mount Whitney Station to the summit and of the construction of the building were intrusted to Mr. G. F. Marsh, of Lone Pine. It was an article of agreement with Mr. Marsh that the Institution should be at no expense for the repair of the trail, and so as early as April Mr. Marsh and his friends held a ball at Lone Pine which proved to be a highly enjoyable and successful affair and netted a considerable fund. As soon as work could begin he started repairs on the trail, but was hindered by the deep snows until later than had been expected. The first mule train reached the top July 28, 1909, and Mr. Marsh completed the house just a month later. Some of the difficulties he overcame are mentioned in a report the writer made of his trip to Mount Whitney in August, 1909, from which quotations follow. During a part of this stay of 2½ weeks Director Campbell's party was there for the

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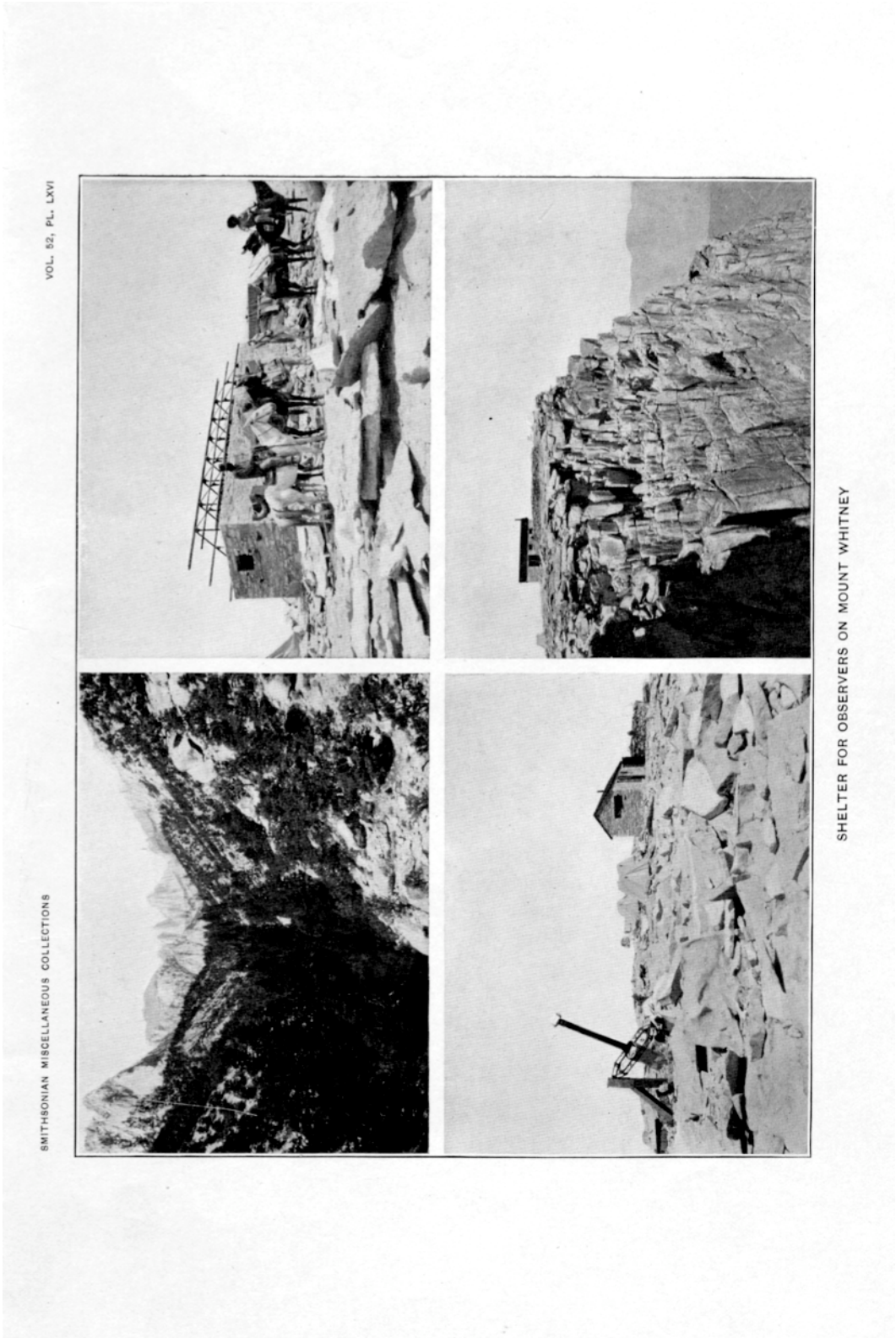
study of the spectrum of Mars, and the writer is under obligations to them for their kindness and good fellowship.

"MOUNT WILSON, CAL., *Sept.* 14, 1909.

"DEAR SIR: I left Pasadena about 9.30 p. m., August 19, and took the 11.30 p. m. train at Los Angeles for Mojave. I slept occasionally but with great fear lest I should be carried by Mojave, and at length reached there, a little late, at 4.30 a. m. The train for Little Lake, mostly a freight train, left at 7 a. m., and, after stopping all along the way to shift and unload freight cars, reached Little Lake, 3½ hours late, at 6 p. m. I got supper there and started by auto-stage at 6.15. Having 3 boxes of delicate apparatus, one of which I felt it necessary to carry in my arms, the ride of 50 miles from Mojave to Little Lake was not altogether pleasant. Two automobiles started together, but the one I was in stopped near Olancha and nearly two hours of work failed to start it, so that all the passengers crowded into the other. We reached Lone Pine at 11.30 p. m. At 8.30 a. m., August 21, with Mr. Wm. Skinner, of Lone Pine, as guide, and with a driver and animals to carry my baggage, I started for Mount Whitney. We camped about 4 p. m. with Mr. Robinson and his packers at Big Meadow; elevation about 10,500 feet. I found that nearly all the material for the house had gone up to the top, and my boxes were at Robinson's camp. Mr. Skinner and I left camp at 6 a. m. and arrived on the summit of Mount Whitney about 11 a. m., August 22. We found Mr. Marsh with four workmen. The walls of the building were done except gables and partitions, and the frame of the roof was up. The masons were laying the walls of the little stone hut for my work, and they finished it, including the roof, that day. Several 6 x 6 tents had been loaned by Professor Campbell, and in these we cooked, ate, and slept. Ham, bacon, Mulligan stew, and flap-jacks were the staple foods. I rather ran down during the week before Mr. Campbell came, and got into bed by Friday afternoon. Fortunately Mr. Campbell brought a doctor, who cured me in a couple of days. I found that a few days before my coming there had been a thunder-storm on the mountain one night. One of the men had gone out of the tent and had been nearly killed by lightning or fright. There is a monument close by where a man was killed by lightning in 1904. All the mountain was glowing with St. Elmo's fire, and they all had been pretty uneasy. On the following night all the workmen left Mr. Marsh and ran down the trail when another storm began. However, they returned to him in a couple of days, thanks to his grit in staying on top all alone. I found also that a number of people in Lone Pine had been working against the project, and that Mr. Marsh had had great difficulty to repair the trail. There was much snow and ice, and he and others were completely snow-blinded for a day or so. The packers had been slow in beginning, and had deserted the job once or twice, so that he had to leave the top once and go down to Lone Pine and stir up Mr. Robinson. Mr. Marsh told me that once he

Appendix B

A SHELTER FOR OBSERVERS ON MOUNT WHITNEY



Appendix B

A SHELTER FOR OBSERVERS ON MOUNT WHITNEY

was so discouraged that he sat down on the trail and cried, but got up and went at it again. In the face of the opposition and the natural difficulties, I think very few men could have carried the job to completion. Marsh worked at all kinds of jobs himself—cooking, breaking stone, carrying stone, carrying snow for water, riveting and cementing, as well as general bossing. He will never get paid in this world for the work he did on that house. I hope the Secretary will write him an appreciative letter of thanks.

"I had set my apparatus up mainly by Thursday night, August 26. Friday it snowed a little, but the house was finished Friday afternoon, August 27. Two of the workmen went down that day, and the masons on Saturday morning. On Friday about noon, three of us being seated about the stove, one of the workmen tried to show us how convenient a Smith & Wesson hammerless revolver is for shooting from the pocket. He forgot it was loaded, and it went off bang! and struck the stove pipe in the corner of the room. Fortunately nobody was hurt and the stove pipe was too thick to penetrate, so that the bullet fell at his feet. This celebrated the completion of the house.

"Mr. Campbell, with Messrs. Albrecht, McAdie, Dr. Miller, Hoover, and Skinner, came about noon on Saturday, August 28. They arrived in a thunder-storm of sleet. Lightning struck near by just as they reached the door. It became partially clear on the following Wednesday, and Campbell secured good observations on Wednesday and Thursday nights. My own preparations were set back by the storm, so that I only got ready Thursday afternoon, September 2. Friday morning was beautiful, and I think my observations of that forenoon were satisfactory. I took two bolographs also about 2 and 5 p. m. of Friday afternoon between clouds. On Saturday it snowed 4 inches. Mr. Campbell and party went down. They almost lost one mule among the rocks (had to leave the mule behind after two hours' work, but it went down the trail the following Wednesday), and three others slid off of the ice on the east side of the range and rolled a hundred feet or so. The Smithsonian has been so fortunate as not to have had any of the animals in its employ injured during the whole operations. This no doubt is largely due to the skill of the head packer, Horace Elder, of Lone Pine. He is said to be perhaps the most skilled packer in California, and his good nature and eagerness to do his best for us in the work were very refreshing. After waiting several days without much improvement in the weather, Mr. Marsh and I left on Wednesday, September 8. I hope it will be possible for me to complete my work up there next July or early August, when the weather will probably be better. We were very unfortunate this year in being up there while storms prevailed in Mexico and all over the Rocky Mountain States.

"A little later I hope to send pictures taken on Mount Whitney. One of the pictures which I did not get would have represented me on the back seat of the auto riding the 50 miles to Little Lake, holding my pyrheliometer box in my arms in a desperate effort to

Appendix B

A SHELTER FOR OBSERVERS ON MOUNT WHITNEY

keep it from jolts, while I leaned over the back *seasick,* and all at 3.30 a. m., September 9.

"Yours truly,

C. G. ABBOT.

"Mr. C. D. WALCOTT,
"Secretary Smithsonian Institution."

The observations of Director Campbell on the spectrum of Mars were entirely conclusive in showing that water-vapor, if present at all in the atmosphere of Mars, is in less quantity than is contained in the extremely rare and dry part of the earth's atmosphere which is above Mount Whitney. In fact, no evidence at all of water-vapor on Mars was detected by Campbell.

The writer's experiments involved the use of a complete spectro-bolometric outfit in the determination of the solar constant of radiation, and it was the first occasion in which this complex apparatus had ever been used at so great an elevation. Fortunately it worked well, the observations were highly satisfactory, and they yielded results which confirm almost exactly the accuracy of the work done by Smithsonian observers at Mounts Wilson and Washington in recent years. Unfortunately both Director Campbell and myself were on Mount Whitney during unusually unfavorable weather, for the whole Southwest, including northern Mexico, was just at that time visited by floods of rain and cloudy weather. Such a condition would not probably be met with at that season one year in ten.

It is the hope of the Smithsonian Institution that many observing expeditions in many branches of science will apply in the years to come for the use of its shelter on Mount Whitney. There are few mountain peaks in the world of like elevation which are so readily accessible, or which present more nearly the conditions of dryness and marvelous transparency of air which would be expected in high flights with balloons. Persons who desire to work upon Mount Whitney should apply to the Secretary of the Smithsonian Institution for information or permission to use the house there.

Appendix C

Up from "The Land of Little Rain."

UP FROM "THE LAND OF LITTLE RAIN" TO THE LAND OF SNOWS

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BEING THE JOURNAL OF A SLEDGING TRIP UP MOUNT WHITNEY IN WINTER

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BY J. E. CHURCH, JR.

Sierra Club Bulletin
June 1909

UP FROM "THE LAND OF LITTLE RAIN" TO THE LAND OF THE SNOWS

Sierra Club Bulletin. June 1909, pp. 105-118

UP FROM "THE LAND OF LITTLE RAIN" TO THE LAND OF SNOWS

BEING THE JOURNAL OF A SLEDGING TRIP UP MOUNT WHITNEY IN WINTER.

By J. E. Church, Jr.

Hunter's Camp, 8050 Feet,
Thursday, March 2, 1905.

We are sitting by the campfire after sunset in a gorge on the eastern flank of Mount Whitney at the meeting of the desert and the snows. Huge pines form our canopy, while the ground is covered with pine needles and enormous boulders. The walls of the gorge rise three thousand feet above our heads. How ambitiously that bit of tree life is clinging beneath a pinnacle to catch the last glint of the western sun! A trout stream is brawling through the snow down in the brush. A large trout was seen to-day vainly attempting to surmount a cascade. A strenuous trip he must have had from the valley five thousand feet below.

The temperature of 42° F. is refreshing after the journey through the desert. Only yesterday I started southward with the argonauts of the twentieth century. They were setting forth to penetrate the depths of the torrid Death Valley, I to scale the frigid mountain-tops. As twilight deepened we parted company. They sped eastward to the mining camps, I journeyed southward through the night down the long trough of Owens Valley where my companion awaited me. As the waning moon was rising over the high wall of the Inyo we met and journeyed to his home in the little oasis of Lone Pine nestled at the base of Mount Whitney.

As day dawned, the granite walls of the High Sierra slowly emerged from the shadows. A thin wisp of cloud floated away from the point of Whitney as the sunlight

touched the summits. Our destination was revealed. The immense heights that we were to scale were dwarfed by the distance of the range, but the steepness and the contrast of color were both there. Peeping low down through the green of our oasis was the somber brown of the Alabamas, the last tiny range of the desert. Above it rose the gray of the Sierra, the sky line one long succession of saw-like points. The height and the majesty of them we were to appreciate as the days passed by.

Of snow there was apparently but little, and only two passes were dreaded by my companion and guide. He had blasted a trail to the summit under conditions that try men's souls. I had tested a small but efficient outfit for winter mountaineering and felt confident that we could live in comfort for ten days with the equipment and supplies we could haul up the mountain face. In the joint experience of the two there was the assurance of success.

Marsh, my companion, is English and gritty; he also is a droll fellow and enlivened the day. Our route traversed the Alabamas with their sculptured rocks and Lone Pine Cañon, guarded by a majestic peak of similar name. We had pushed the horses up the mountain far beyond our expectation and by dint of manœuvering we had driven them over the snowfields until we had gained the forested nook at the foot of Lone Pine Falls. I hastened to send the French-Irish lad back with the animals for fear that darkness should overtake him in the cañon. I did not realize that my vision was darkened by wearing smoked glasses. My companion suggested that we put green goggles on horses to make them think that straw was hay.

Marsh is a desert man by inclination. He has made a bed for himself on some needles under the lee of a boulder despite my suggestion that he try the snow.

Marsh is going to bed and has wormed his way into the sleeping-bag as laboriously as a snake works his way out of his winter skin. I inquired about the pillow sack

in the foot of the sleeping-bag, placed there to protect the feet against frostbite. He calmly informed me that he had his feet on it all right. Shades of Jack Frost! Feet on top like Mike who took the pill box instead of the pills. I instructed him concerning the hole in the pillow.

"The shadow of a rock in a weary land"—such is our shelter to-night under the lustrous stars. I have the shovel ready for coyote or bear, and all the pantry near at hand except the frying-pan and the can of tomatoes. They can eat only the label of the can. We shall save the substance.

FRIDAY MORNING, MARCH 3.

I lay awake last night. The sleeping-bag was too warm for the temperature of 35° F. which prevailed. I planned a weather observatory for the summit of Mount Whitney with monthly post and stations of refuge for the courier in case of storm. In summer these stations could be used by stout or easy travelers who desired to make a pilgrimage to the top of the United States. The observer could keep the snow out of the trail to timber line for exercise, if necessary.

We have eagerly discussed our route this morning. We are camped at the junction of two immense gashes in the mountain. The one on the right leads by cyclopean terraces directly to the base of Mount Whitney and leaves the traveler gazing impotently up a face of rock which rises sheer four thousand feet above his head. The apex of Whitney with its outlying saw teeth can be seen up the gash and remind one of the dome and towers of Saint Peter's whose front could more easily be scaled than could this. The other gash, the continuation of Lone Pine Cañon, turns the flank of Whitney by affording the opportunity of scaling the range to the south of the saw teeth and gaining the summit of Whitney from the rear. At the junction of the two cañons stands a majestic crag, the peer of any in the range.

Our work to-day is to surmount Lone Pine Falls, now practically dry through the freezing of the mountain

streams, and gain Lone Pine Lake where the river is wont to pause a moment in summer on a terrace in its downward plunge.

FRIDAY EVENING, IN CAMP ON THE TRAIL.

"As thy work, so must thy strength be."

We are glad to settle down here by a mahogany camp-fire on the steep hillside. Our canopy is an ancient fir tree whose branches are so round, so hoary, and so sturdy that they suggest the Druids. What a fitting tree to build a Hunding's Hütte around!

We are tired to-night. We have climbed 3500 feet to gain 1000 feet and elevate our camp to this point. This does not include the 3500 feet down nor the struggle with wet snow, into which we often sank above our knees. Had it not been for our rubber leggings, we should have been compelled to retreat.

Our method of hauling our outfit was ludicrous but inevitable, owing to the nature of the slope traversed. We hauled and pushed until Marsh was blind; then hauled on the hundred-foot life line, following that by dividing our stuff into sections, which we packed on our shoulders, the sleds riding ignominiously bottom up. So steep was the grade that we often rose our height within our length. On the last carry of only one hundred feet I took off my mittens, laid down my alpenstock, and was on the point of removing my colored glasses, so exhausted had I become.

The scenery yesterday was grand. To-night it is more congenial. The night is mild. Lone Pine Lake, where we shall make our base camp, is only eight hundred feet above us. No fear of not gaining the summit, even in storm, providing the slopes are passable.

SATURDAY, MARCH 4, AT DAWN.

"Sleeping 'neath the old pine tree." Its branches are just growing ruddy in the morning glow. The western branches are somewhat shorter—evidence of high and

exposed altitude. A wonderful old tree! The stream sounds in the steep depression below like wind in the pines. The landscape is wintry. The gentler slopes of the mountain are laden with snow. Dull greens cover the steeply rising bed of the cañon, with sentinel pines far up the face of the cliffs. One old tree, dead above, plume-shaped below, stands against the palisade behind us—an artistic creation. Part of it towers visually above the gray rock face. Large granite boulders are around us, bedded in chinquapin brush. The apex of the cañon wall on the south we have named Mount Marsh. The noble crag now near at hand we have named Crag Alexander Winchell in memory of a noble scientist and teacher.

ON THE TRAIL.

Crust hard above 8000 feet! Yes, in the northern Sierra or on northern exposures. Here solid only in the early morning. Such is winter mountaineering in the subtropics. My Canadian snowshoes would be welcome.

SATURDAY EVENING, LONE PINE CAMP, 9800 FEET.

We have gained the terrace of Lone Pine Lake, and are camping in a thick grove of tamaracks. The lake is only partially frozen over. Marsh has insisted on shoveling a neat little suite of holes in the snow for bed and living rooms. The snow here is only eighteen inches deep.

Mr. Bonnett's thermometer shelter is sitting on a rock near by, peeping from its hood of snow. Poor fellow, so this was his Waterloo in early October! The old peak frowned upon his effort to place his instruments upon her summit. But then, he went all unprepared for sudden storms. May she be more gracious unto us.

We have advanced our camp from 9200 feet altitude to 9800 feet, but we were compelled to make so many return trips that our total was nearer 1500 feet.

What beautiful views! Mount Marsh wore a cloud cap yesterday, and to-day we are in storm. Crag Alexander Winchell, which now bends over us, is almost a

second El Capitan. A wisp of cloud is hovering round its brow. High up its flank is a gateway through which Saw Tooth Crags can be seen. Just within the gateway lies Mirror Lake and Camp Celeste. We may not enter through the gate directly. This is reserved for the fowl of the air. But we may climb up another way and gain its portal.

What monstrous boulders are lying strewn on the mountain-side where we slept last night. Some are seventy-five feet long. One might have jostled us had it fallen. To-day a rock fell from the face of Crag Winchell. There were three sharp reports accompanied by echoes on the heights. Then a fragment continued its way down the face of the crag, leaping from point to point with a sharp report like the blow of a giant stone hammer, repeated as slowly as the ticking of a clock. Thirteen blows or more were struck before the rock found its resting place on the cañon floor. There is room enough, however, for us all here. So the reports gave us only pleasure.

We have a good base camp now. To-morrow we shall make our advance camp at Mirror Lake, and then make the dash for the summit.

The scenes here are magnificent. Life is one long delight, despite the heavy packing.

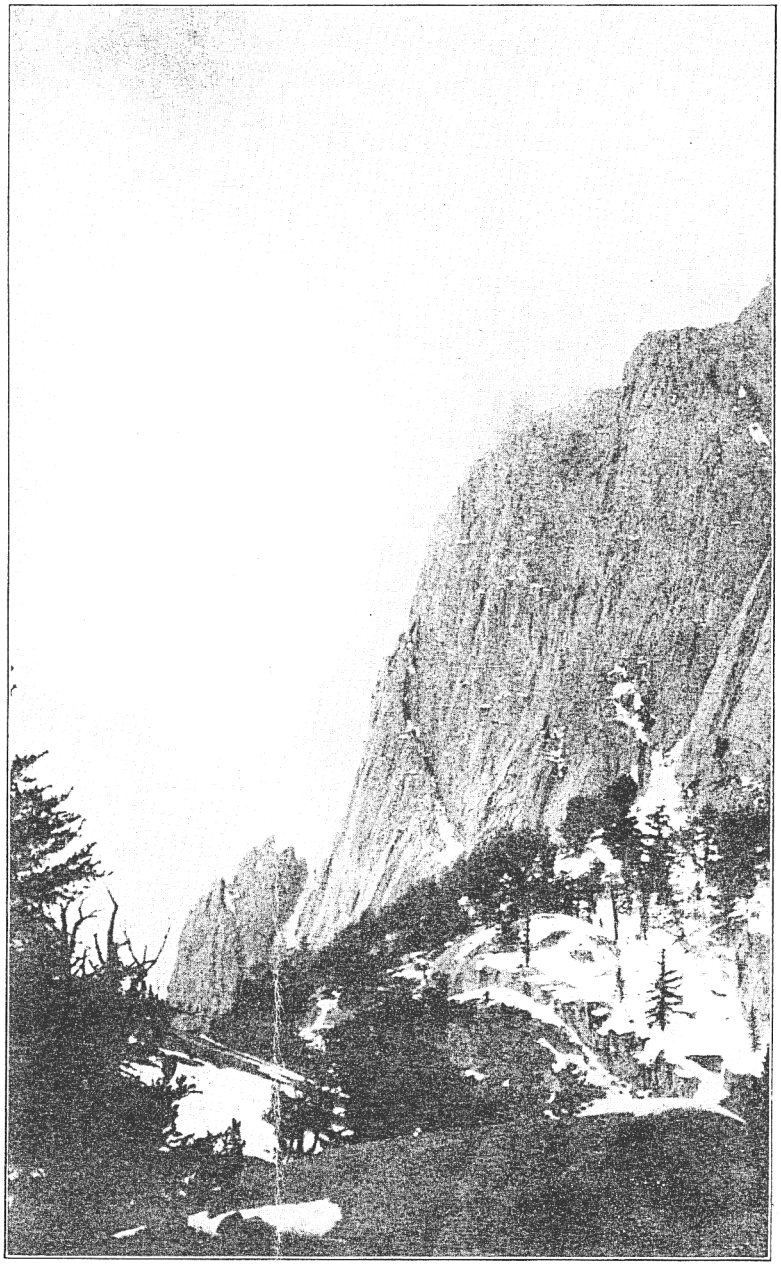
Another lesson from the tamaracks. Two old fellows near by are standing shoulder to shoulder, and so closely that they are square rather than round. They are willing to concede something in return for the mutual advantage of each other's society.

SUNDAY NOON, MARCH 5, CAMP CELESTE, 9350 FEET.

The trip up from Lone Pine Camp has been comparatively easy. The portal into which we passed is in reality a long glen, known as Ibex Meadows on account of the numerous horns of mountain sheep found there. At its upper end is timber line. To the left is a frozen waterfall of emerald hue. To the right is a tiny shelf containing

Appendix C

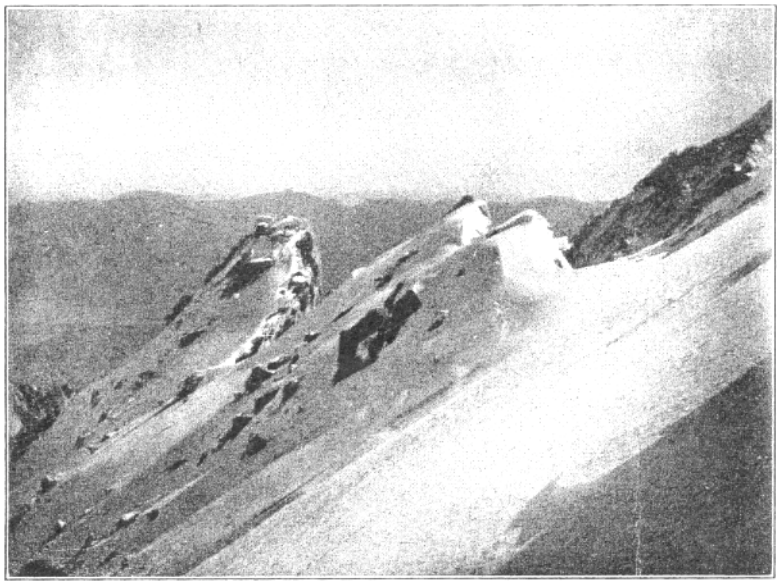
UP FROM "THE LAND OF LITTLE RAIN" TO THE LAND OF THE SNOWS



CRAG ALEXANDER WINCHELL FROM LONE PINE CAMP.
"The noble crag now near at hand we have named Crag Alexander Winchell."

UP FROM "THE LAND OF LITTLE RAIN" TO THE LAND OF THE SNOWS

CAMP CELESTE.



MOUNT MARSH.

"Up whose knife-edge of snow-capped rock lay our course to Lone Pine Pass."

a bunch of timber, to which access is gained over mounds of snow. Here is Camp Celeste. Just beyond in the basin of a giant amphitheatre lies Mirror Lake. Before the camp are palisades of granite, studded with a few sturdy pines which have gained a footing in the clefts of the rock.

The snow is falling much as it did last night, not much in quantity but the little balls fall upon my paper and hands rapidly enough to make me think that far more are coming. The clouds slide down over the crags, breaking into wisps here, spreading out into palls there, then after their force is spent, gradually fade out. The town of Lone Pine, far down the slit in the mountain, is bathed in bluish sunlight.

Verily, this is "The Land of Little Rain." Even the snow is sparse and dry. Mrs. Austin, who coined the epithet and brought fame to this land, lives near the mountain's foot.

Marsh is not feeling well to-day. This will account for his continued criticism of the sleds. The "go-devils" have now become "hang-back devils" and "roll-over devils." I suggested that what the Creator should have produced was a man, mule, and flying machine combined in one creature. He agreed that there might be room for inventive genius in this direction.

Our grove here is quite sheltered. We shall turn our sleeping tent upside down on some tamarack supports by the side of a boulder and stay out the storm.

SUNDAY EVENING.

In the shelter of the rock in the storm which has at last arrived in its full strength we sit and hope. It may be long or short, but to-night, at least, it has become a blizzard. The air is full of snow and the old tamaracks are powdery, while jets of snow are pouring from the rocks. The wind is whistling in the trees, and a fine sprinkle of snow is falling from our rock over us as we sit under its lee. The fire is casting its ruddy glow in defiance of the storm.

Marsh has become quite cheerful. The barometer is steady, and the barometric pains in his foot have ceased. Both indicate a speedy ending of the storm.

I can scarcely see my lines because of the water on the page. So I shall just push the pencil through it. The page will dry later.

This afternoon we went up the palisade to inspect the trail. Lone Pine Pass, where our route crosses the range at 13,000 feet, was faintly distinguishable in the clouds from where we stood above Mirror Lake. Across the amphitheatre arose majestic Crag Winchell, which broods over our camp.

MONDAY NOON, MARCH 6.

Breakfast has just been eaten. Two inches of snow fell last night. The wind is still blowing moderately from the east. Masses of cloud are still passing. The minimum thermometer registered 12° F. above zero last night.

It was, therefore, no colder than at the altitude of 13,000 feet last July, when Marsh was constructing the trail. Zero temperature in a sub-tropical climate is certainly low enough, and Mount Whitney lies between two warm valleys.

The barometer remains steady at 10,400 feet.

The snow seems to be so dry that the cold does not make it pack readily. Its drift, moreover, is considerable. We can make the ascent unless warm weather starts the snow slopes to moving or makes them insecure.

I saw an eagle this morning as I lay in bed, soaring round the brow of Crag Winchell. He soon alighted there. He seems to have his eyrie on the crag. Marsh saw him soaring there two days ago, when we were at Lone Pine Lake.

My lips are very yellow and sore with blisters. I have tried court plaster, but unsuccessfully. I wish we had some tomatoes or other vegetables. We are saving our canned beans for the dash up Whitney.

MONDAY EVENING.

The storm with its rear guard of slowly passing clouds has gone. Now we shall follow. A cold wind, however, is on to-night.

I went to Lone Pine Camp this afternoon to bring up more flour and provisions, and a light tent. Our tracks of yesterday were drifted over in many places. The tracks of rabbits and squirrels were seen. Marsh says that a large snowshoe rabbit lives in the hills near Lone Pine. Their feet are covered with a mass of fur, and fluffy fur covers their bodies. Nature seems to have provided for them. I heard a bird to-day, but no more drumming grouse. This seems to be their mating season. As I was returning through Ibex Meadows, a faint halloo came floating to me down the mountain. My two hours' leave had elapsed, and Marsh was signaling. How weird the sound of the distant voice is when nature is so silent that the cracking of a twig sets the blood to surging.

Despite my weariness, I ascended the palisade to 10,800 feet to obtain a photograph of Lone Pine Pass and Crag Winchell. From this point the crag becomes a knife-edged spur terminating in a slight pinnacle. The wind had now risen and was sending the dry snow curling over the faces of the granite domes of which the palisade consists. The track of yesterday was covered, and I seemed to be wading in a mass of meal grown treacherous by concealing the icy, slanting granite surface beneath. The rope mesh of my Bavarian snowshoes alone made my footing at all secure.

I finally waded through it all to where the last rugged but battered tamarack defied the wind. Stout it was but short, and its few limbs symmetrically grouped like an umbrella top. Here on a boulder overhanging Mirror Lake I placed my camera. There was small space to work on, and the wind was stinging. Care had to be constantly exercised not to step backward into the yawning fissures nor slip forward into the amphitheatre below. I finally sat down on the boulder with the tripod astride

my knees, but nearly succeeded in pitching the camera into my lap when I attempted to rise. I obtained, I hope, a fine cloud picture of Lone Pine Pass where the worst of our journey will be.

The trip to-morrow will try our endurance to the utmost. We cannot advance our camp much farther on account of the soft snow and the resulting exhaustion of plunging through it with heavy packs. We have left rope and creepers at Lone Pine Camp on account of their weight. We shall discard everything except the camera, the beans, and an extra pair of felt boots for emergency. Marsh, however, insists upon coffee rather than boots, but for me, feet against stomach most of the time, at least. Without feet we shall be at the mercy of the elements. Perhaps the strong wind may sweep away the drifting snow. A little delay might give us a better surface, for it is cold now. But Marsh is very anxious to proceed, and the provisions are almost gone. Ten hours up and back from here in summer—fifteen now for us, surely; so we shall start at daybreak.

5 O'Clock Tuesday Morning, March 7.

The gale of yesterday abated toward midnight. The stars are brilliant. The wind has veered to the southwest. The ground is frozen solid, but the snow refuses to harden. We are now ready to make the final attempt.

Tuesday Evening.

We have met Mount Whitney's advance guard and retreated, but not without a skirmish. The snow was quite compact, after all, and we made fair time over it. At sunrise we could look down upon Crag Winchell. To the north lay Mount Whitney like a giant plateau uptilted toward the west. On its summit the monument could be plainly seen. But we were being forced to the south where the least steep slope of the amphitheatre gave access to the crest of Mount Marsh, up whose knife-edge of snow-capped rock lay our course to Lone Pine Pass.

So steep was the slope and so deep the snow that we often clambered over huge boulders whose height and depth were so concealed that we did not realize their size until the yielding snow let us slip back down their faces. Marsh had preceded me some little distance. When we were well up the knife-edge, I suddenly saw him standing in a tiny gateway of reddish brown rock to which a narrow path of steeply slanting snow afforded the only approach. This was the notorious slide to Consultation Lake which Marsh had feared. By hugging the wall and carefully tilting the inner snowshoe to work it through the narrow space left between my outer leg and the wall, I soon succeeded in gaining a place by Marsh's side in the pass. The barometer gave us the welcome information that we had attained the altitude of 12,950 feet, or only 1500 feet less than that of the summit which we sought.

To the westward, deep, deep below us, and extending, it seemed, almost across the State of California were frozen lakes, pinnacled mountains, and valleys, bare and desolate in the foreground and wooded in the distance—the whole one vast snowy panorama.

At our feet was a vast depression circling the Saw Tooth Crags and Mount Whitney, on whose flanks we stood. At the southern end of it lay the frozen Cottonwood Lakes, at the other Langley's Lake, near which passes the trail from Fresno to the foot of the Devil's Ladder, the only natural means of access to the summit of Mount Whitney. Our route lay along the western side of the Saw Tooth Crags where a ledge along the cliffs afforded scanty room for the Lone Pine trail to reach the head of the Devil's Ladder, where it joins the Fresno trail to the summit.

The field of snow below the pass slanted dangerously downward to the Cottonwood Lakes, but, trusting too much in our morning experience, we started to stamp our way across it. This time there was a strong crust below the drift snow, and our first plunge started ominous

cracks in the snow above us. This meant avalanches. We immediately became more circumspect. Heel-thrust after heel-thrust, slowly repeated, as we faced outward and maintained a precarious balance on the slope, became exhausting, though we exchanged places every few rods. Often my pack overbalanced me, and a sudden fall inevitably resulted. But on every occasion the alpenstock, clutched rigidly by the head, was driven by the impact of my body its entire length into the snow and anchored me firmly. I sat upon it until Marsh stepped round my shoulders and beat a trail into which I could crawl to regain my footing. The slide of two thousand feet into the depression would have meant bitter exertion to return over such snow to our present level, and there was no wood nor had we more than a tiny lunch.

The next slope was quite safe. Here we found Lake View Camp, the old high camp of the trail-makers, with abandoned camp stove and logs of wood. I suggested that we build a fire and spend the night. But Marsh declared that staying here over night would become permanent.

So we hastened on, only to be almost immediately arrested by an ejaculation from him as he pointed to the next dangerous place—the ledge along the precipice. I offered to break the first part of the trail if he would break the second. But we soon realized that the condition of the ledge was dangerous far beyond expectation. The drifting snow had filled the ledge full and was even then sifting over the edge. For us to venture upon it would be to chance death in the abyss beneath, one to five. This was not a bad risk, however, but from a pinnacle that overhung the trail we saw that the ledge for fully a mile until it passed from sight around the shoulder of the mountain was in similar condition, and to continue would be to repeat the chance of going over every few rods. We had brought no shovel, and if we had the snow would have filled up the pathway behind us as rapidly as we

cleared it ahead, or the snow would avalanche and carry us over the verge into oblivion, a kinder fate than imprisonment on the trail at 13,000 feet and higher on a winter night without shelter. We reluctantly decided that the remainder of the journey along this route was impracticable, and our decision was attested by the dull boom of a rock that had rolled from the ledge at our feet.

No, an observatory on the summit of Mount Whitney would not be feasible if the observer expected to come to town each week. An observatory could, however, be erected on the height where we stood, at 13,250 feet, without any great risk and with almost the same advantages that Mount Whitney would afford.

Our return was easy. The treacherous snow had hardened. But in the distant west masses of cloud were piling as high as heaven in fantastic forms like volcanic fires. Marsh had noticed the same formation the previous summer.

Mount Whitney reminds me more of the Kaiser Gebirge and the Bitter Root Mountains than any other I have seen. They are shark's teeth set on end. Yet I believe that Mount Whitney can be scaled by way of the depression on the west and the Devil's Ladder leading upward from it, despite Marsh's conviction that the ladder cannot be ascended in winter on account of the steep wall of snow that covers its terraces. If a crust forms there, steps could be cut up the face of the snow. To accomplish this our outfit must be carried to Lake View Camp and preferably to Langley's Lake, and will require five days more, at least. This attempt must therefore be reserved for a future season. Our time has expired and our provisions are almost gone. With packers we could have accomplished much more, but half the pleasure of the trip would have been sacrificed.

LONE PINE, FRIDAY, MARCH 10.

Tuesday night, following our attempt to gain the summit, a wildcat stole the bacon from the head of our bed.

I could have tweaked its nose from where I lay, had I been awake. Marsh left scraps for it as assurance that he bore it no ill will. Guess it was time for us to depart.

Late Wednesday morning we started down the mountain. Ibex Meadow was firm for once. Those "go-devils" became pretty good little devils — stout little devils. They rolled over like cart wheels, side over side, end over end, down slopes through thickets along the bottom of the cañon. When the slope was fairly steep, we rode on the pack; when too steep, the sled rode with its runners in the air. One sled stood the test to the end. I nearly coasted over Lone Pine Falls in my enthusiasm. From Hunter's Camp, after hanging the loaded sleds in a tree, we tramped to Lone Pine. As we came up the lane through the willows in the darkness, a silent figure waiting at the bars came swiftly to meet my companion, while a little tow-headed fellow in the home gave him a hug that was enthusiasm itself. I was glad then that I had not urged him out along that cliff. The exultation of success is a strong incentive to daring, but the home call is stronger.

Appendix C

UP FROM "THE LAND OF LITTLE RAIN" TO THE LAND OF THE SNOWS

SIERRA CLUB BULLETIN.

PUBLISHED JANUARY AND JUNE OF EACH YEAR.

Published for Members. Annual Dues, $3.00.

The purposes of the Club are:—"To explore, enjoy, and render accessible the mountain regions of the Pacific Coast; to publish authentic information concerning them; to enlist the support and co-operation of the people and the Government in preserving the forests and other natural features of the Sierra Nevada Mountains."

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Appendix D

MOUNT WHITNEY BALL

INYO INDEPENDENT Friday, May 28th, 1909 Vol. XL, No. 52

A fund raiser for the repair of the trail to accommodate the commitment to the Smithsonian regarding the building of the shelter on the summit of Mount Whitney in 1909

Appendix D

MARSH GIVES A BALL TO RAISE FUNDS TO IMPROVE THE MOUNT WHITNEY TRAIL

INYO INDEPENDENT Friday, May 28th, 1909 Vol. XL, No. 52

INYO INDEPENDENT.

INDEPENDENCE, CAL.,

FRIDAY, MAY 28th 1909

Mt. Whitney Ball

The Mt. Whitney ball given by Mr. Marsh on the evening of the 22nd for the purpose of getting money to improve the trail to Mr. Whitney was a grand success. Lone Pine and its vicinity contributed splendidly, also lending service when and however most needed. Independence, Keeler, also Cottonwood were well represented, which was a pleasant feature. Indeed, it was a social success as well as business, the proceeds for the evening amounting to $115.50 which will reach far if not quite in building up the trail.

The grand march was beautifully led by Mr. and Mrs. Shelly. Dancing was in order until eleven o'clock, then refreshments were served in a novel way. Two beautifully decorated wheelbarrows loaded with all the good things passed and repassed—were filled and passed again until enough was the word. Everyone looked glad, and it was many times remarked how sociable and congenial everyone felt.

Mr. Marsh became interested in 1903 when the Sierra Club of 320 people tried the ascent to Mt. Whitney from the other side. The journey proved too laborous and only 120 succeeded in reaching the summit. Their expenses amounted to seven thousand dollars. Now Mr. Marsh ever alert and ready to grasp opportunities for the advancement of his community and surroundings finally could see what a help it would be for this place if a trail could be made from this side. He set about at once and through his efforts it was taken up, and many contributed to the building up of the trail which means much for Lone Pine.

The trail in need of improvement now was begun in October 1903 and was finished during July, 1904. Mr. Marsh kept up a correspondence with professors from different places knowing if they could be persuaded to take the trip it would end in their building an observatory or shelter on the summit which would be a great attraction for this place he succeeded for in August, 1908. He with Prof. Abbott, Prof. of the Smithsonian Institute Observatory, who is the successor of the late Professor Laughley who ascended Mt. Whitney about 1881, and Prof. Campbell, Director of the Lick Observatory University of California, ascended Mt. Whitney. Everything proved favorable to the trip. In their delighted prospects they decided to build an observatory and a permit was granted Jan. 4th, 1909, for a plot on the summit of Mt. Whitney to the Smithsonian Institute of Washington, D. C., for the purpose. M.

Appendix E

GUSTAVE F. MARSH OBITUARY

Owens Valley Progress Citizen, Vol. 34, No. 14, 3 May 1946

Appendix E

OBITUARY / GUSTAVE F. MARSH / 1869 - 1946

Owens Valley Progress Citizen, Vol. 34, No. 14, 3 May 1946

G. F. Marsh Passes; Many Pay Tribute

Another Owens Valley pioneer passed away recently when death came quietly to Gustav F. Marsh, 77, at 4:30 a. m., April 20, at his home in Lone Pine. Mr. Marsh, who was retired, had been ill for some time with a chronic heart condition, Dr. George D. Shultz reported.

Funeral services were conducted at the family residence in Lone Pine Tuesday, April 23, at 2 p. m. by Rev. Robert J. Kersey of Trinity United church. Interment was in the Knights of Pythias cemetery.

Simultaneously commemoration services were held in the auditorium of Lone Pine Union high school, which Mr. Marsh was responsible for establishing. Rev. Frank Tolson gave the Invocation and the band played "Nearer My God to Thee". Maj. George F. Putnam addressed students and teachers. The services ended with the singing of "The Lord's Prayer" by the Glee Club.

Among the many people who came to Lone Pine to attend services in memory of Mr. Marsh were the following: Louis V. Skinner, Reno; Mr. and Mrs. W. L. Skinner and I. C. Boe, Morro Bay; Archie Haven, San Onofre; Mrs. Mary Denart and Mrs. Ruth Stewart, San Juan Capistrano; Mrs. G. J. Kahn, Los Angeles and Mr. and Mrs. C. O. Dominy, Simi.

Out of respect for this civic leader, who carried mail for many years, the flag was flown at half-mast at the Keeler postoffice. The office was closed through the services while many friends attended.

Mr. Marsh was born on Good Friday, March 26, 1869, at Morton, England. At th age of 20 he came to the United States arriving at New York on January 17, 1890. He took out his first naturalization papers at Newcastle, Colo. Due to moving about for several years he was not able to take out his final papers until July, 1902 at Independence.

For a number of years he followed mining. He returned twice to England. The call of home was strong, the call of the west was stronger. In July, 1900, he came to Lone Pine and on December 11, 1901, married Elizabeth Dodge.

In April, 1902, he was awarded the mail contract between Lone Pine and Mt. Whitney Station, then Lone Pine and Lone Pine Station and finally from Lone Pine Station to Keeler. For 28 years he was a mail carrier.

Mr. Marsh built the first telephone line in southern Inyo, a distance of four miles between Lone Pine and Mt. Whitney Station.

It was through his untiring efforts that the buildings were erected on Mt. Whitney. At one time he remained 20 days on the summit. These buildings were completed during the summer of 1910, in time for the Crocker expedition to make the ascent to Mt. Whitney to make observations of the planet Mars to determine if there was life or moisture on the planet which was closer to the earth at that time than for many years.

The expedition was headed by Dr. W. W. Campbell of the Lick Observatory. Mr. Marsh was in the party during the entire period. These observations are now a matter of record in the Smithsonian Institute.

When boxes for measuring the water in Lone Pine Creek were asked for, it was his plan that was accepted and has been in constant use since 1902. Engineers came from different states to get the design which has been most successful.

For 18 years he was president of the Board of Trustees of Lone Pine Union High School. He was one of the trustees who blazed the trail that led to the present school. At times the going was difficult but he continued on. His slogan was, "If I have helped one child to get an education then I have been well paid."

At the time of his death he was on the board of directors of the Motor Carriers Association of California, a position he held for many years. He was Supervisor of District No. 4 for two years.

Mr. Marsh was of a retiring disposition, ever ready to help in time of distress. To him Lone Pine was the loveliest spot in the world. His garden was a never ending source of pleasure by day and the stars always held his interest at night. It was due to his interest in astronomy that he made the trip alone to the summit of Mt. Whitney to observe Haley's Comet and the eclipse of the moon. Mr. Marsh was the only person in the United States to get a complete report of the event. This data is still on file at the Lick Observatory.

Besides his widow he leaves two sons, Gustav F. Marsh, Jr., and Maude W. Marsh and a grandson, Lloyd David Marsh, age 5, all of Lone Pine. A second grandson, George F. Marsh, is serving with the Navy somewhere in the Pacific. Other surviving relatives include a brother, four nieces and six nephews, all in England.

Appendix F

HALLEY'S COMET

Appendix F is a collection of the letters & publications regarding Gustave F. Marsh's observations of Halley's Comet and a total eclipse of the moon from the summit of Mount Whitney in 1910.

page item

Appendix F

OBSERVATION OF HALLEY'S COMET FROM MOUNT WHITNEY

Lone Pine, California 5 June 1910

Prof W.W. Campbell, Mt. Hamilton

Dear Sir

Your kind letter to hand Friday night. … (answering your inquiry about my observations of Halley's Comet from the summit of Mt. Whitney last May.) Many promised to go with me but they all fell down at the last minute. So I determined to go alone for J. E. Church kindly loaned me snowshoes. So I started Sunday morning 8:30 & figured to be on the top at 12 AM next day & see the Comet & Eclipse. I drove to the power plant & started to walk at 12 AM I took 1 Blanket, 1 piece of Canvas, some tea & coffee, 1 can Baked bean, snow shoes & 1/2 pint whiskey It made quite a load. I took my time & got to Lone Pine Lake 4:20 & Robinson's Camp at 5 PM first snow at 10000 ft. trail all good so far small patches of snow off an on to timber line. I fixed my camp built a big fire gathered up all the old sacks I could find & old clothes & made me a pretty good bed with some boxes for a wind break. I passed the night very comfortable I got up at 3 AM eat my breakfast & started out just as it was light enough about 4 AM. The snow was just right for traveling. no frost at Robinson's Camp I made good time to that first big snow bank there the snow was so hard I could not get a footing my snow shoes would not hold so I took to the rocks & with my snow shoes & pack it was quite a task but I did fine it was good going till I got to about 12,500 about where the ice was last year there I found the snow very hard and smooth that was about 6 AM I could not use my snow shoes so I used them to dig holes for my feet I found that was very difficult I needed an alpine stock then I had to stamp my feet down till I got a footing & the higher I got the worse it got & I dare not turn round so I made a bee line for the cliffs towards the east but oh my it was so slow I had to make sure of every step but I made it in safety at Lone Pine Pass the snow was in ridges on the Lone Pine side I never saw the snow so smooth & hard & it was easy going to Lake View Camp from there there was very little snow till I got to the big bank near Mt Whitney but it was easy going I got to the top at 11:15 oh but I was tired I made a fire & started my can of beans for soup. took out the mirror & at 12 noon I signaled to Lone Pine & got an answer in 3 minutes. I had promised my wife I would signal at 12. after I got an answer I felt pretty good I eat my bean soup sat out in the sun looked around & saw a big fat ground Hog sitting by the monument he did not seem a bit afraid he came & packed off some old bread I had thrown out I found the building in good shape only the door to the room for the tourist was down & the room was half full of snow & it's pretty sure someone did not fasten it very well or left it open entirely. It can be put back in a few minutes with help quite a bit of snow had drifted in the other 2 rooms through the door ventilators & laps in the roof I find it will be necessary to close up every crevice there was no snow on top of the mountain It was a beautiful day & I got ready to see the comet but at 5 PM it got cloudy but the moon came up full speed alright & was clear as a bell but towards night it clouded again & for the first quarter of the moon it was cloudy but after that it was clear. The comet was in plain view as soon as it was dark & just before the moon was covered the sky was perfectly clear except the fog bank very low down towards Visalia & the comet showed up grand & was in plane sight until the head of the comet got in the fog bank it seemed particularly bright at about 8.30 when the moon was almost covered the tail almost reached the moon it swept almost across the sky I slept good I had quite a headache at times I made a signal fire at night & saw 5 fires in return The minimum temperature was 23° below zero & max 55 (as recorded by McAdie's thermometers left there last September) there was 10% frost the night of the 23rd at 5 PM it was 36 & at 7 AM it was 22. I left the top at 7AM & got home in town at 2:30 I found it more difficult coming down the snow on the Lone Pine side than it was going up. but I kept to the rocks all I could I slipped once but did not slide very far I was very tired for days Hoping to see you again soon. I shall be glad to introduce you to Maule Whitney Marsh born March 21st

Best Love to all from us all Yours Truly, G. F. Marsh

Campbell's (Director of the Lick Observatory) reply follows on the next page

OBSERVATION OF HALLEY'S COMET FROM MOUNT WHITNEY

June 11, 1910

Dear Mr. Marsh:-

Professor Albrecht and I have read your letter of June 5th with unusual interest. I am thinking of publishing part of it in one of our journals. You were certainly most courageous to undertake the journey alone, and I am almost inclined to say that you were unwise, though fortunately you ran the risks safely. I dislike to think what might have happened had you slipped on the ice and broken a leg or otherwise injured yourself.

It would not have been possible for me to make the trip with you at this time. Professor Abbot writes that he is planning for an expedition this year, to occur two or three weeks earlier than last year, provided you can arrange the transportation. I hope you will be able to get away from your work long enough to go with him. He ought not to be allowed to go up unaccompanied by a man of experience such as you and Skinner have had. It is really worth while to make some sacrifice to go with him, for his work is of great importance and I should like to see your name mentioned in his publication of results.

Congratulations to Mrs. Marsh and yourself on the coming of Maud Whitney Marsh.

I think you must have had a better naked eye view of

OBSERVATION OF HALLEY'S COMET FROM MOUNT WHITNEY

G. F. M.-2 June 11, 1910

Comet Halley and the total lunar eclipse than any scientific man had. If you could make a definite statement as to how much of the tail you were able to see on that occasion, I should like to have it for our records.

It is surprising how little snow there was in the vicinity of Mt. Whitney. Is it not probable that there will be a shortage of water this fall?

Yours very sincerely,

Mr. G. F. Marsh,

Lone Pine, Cal.

(This letter was written by W. W. Campbell)

OBSERVATION OF HALLEY'S COMET FROM MOUNT WHITNEY

Marsh's second letter was requested by R. G. Aitken and it was published in the "Publications of the Astronomical Society of the Pacific," Vol. 23, pp. 240-242, 1911, by R. G. Aitken.

OBSERVING HALLEY'S COMET FROM THE SUMMIT OF MOUNT WHITNEY.

Learning from Professor A. G. MCADIE that Mr. G. F. MARSH, of Lone Pine, had climbed Mount Whitney for the purpose of viewing from its summit Halley's Comet and the total eclipse of the Moon on May 23, 1910, I wrote to Mr. MARSH to ask further particulars, and print herewith his reply. So far as I am aware, Mt. Whitney is by far the highest point on the Earth's surface to which anyone has climbed for the sake of seeing a comet, and a record of the feat seems of interest. R. G. AITKEN.

[Copy of letter.]

LONE PINE, INYO COUNTY, CALIFORNIA.

Dear Sir: Replying to yours of a few days ago in regard to the comet I saw from Mt. Whitney: I left Lone Pine about 8 A. M. and drove 10 miles to the mouth of the canyon. I sent the team back and fixed my pack of blankets and food and a pair of snowshoes (kindly loaned me by Professor CHURCH, of Reno). I got to timber line at about 4 o'clock. I fixed my camp and made ready for an early start next morning, as I did not know what I might be up against. I slept well and left camp at 4 A. M.—just daylight.

I made good time to 12,000 feet by avoiding the snow on the steep places. I could not use my snowshoes on the steep ground, so I climbed the clear rocks. At 12,000 feet the snow was deeper, but I made good time to 12,500 and then the snow was icy and hard to get a footing on. It took me a long time to get to 13,000, but by being sure of every step, I made it without accident and got to Lone Pine Pass, 13,375 feet, at 8 A. M. There was a long stretch of snow for half a mile on a steep hillside, but the snow was rough windrows, so I made good time. At Lake View, 13,550 feet, I went over a big bank of snow all right and then came to a little gulch which was very steep, but the snow was soft and I got a good footing. This was the most dangerous place on the trip; one slip there and it would be all off.

Appendix F

OBSERVATION OF HALLEY'S COMET FROM MOUNT WHITNEY

From there on I made good time and got to the top of Whitney [14,500 feet] at about 11 A. M., just about the time I thought I would. I found the building[1] in good shape and everything as I had left it. I made a fire, but did not feel hungry. I fixed my signal and waited till 11:45, the time I was to signal to my wife. I opened the shutter and immediately got a flash from Lone Pine. Then I gave my signal—1.2—and got 1.2 in return. I also got signals from several parts of town, showing they were on the lookout for me, as a few said I would never get there.

I fixed up good for the night, read the weather report of 23 below zero, and fixed up a signal fire of old paper and chips so I could signal at night, but it started to cloud up and looked like storming. Heavy banks of haze formed to the west and at sundown the whole sky was cloudy and I thought it was all off. At 7:30 P. M. it cleared and I lit my fire. Clouds drifted across, but I got an answer from Lone Pine.

I was getting anxious about the Moon and the comet when the clouds began to break. I commenced to look for the comet but the clouds bothered. Pretty soon the cloud raised and I saw the Moon about half covered, and in watching it so close I almost forgot the comet. I watched the Moon until it was almost covered, then I saw the tail of the comet. Then all of a sudden the comet showed in plain view. The

[1] The building erected by the Smithsonian Institution in 1909, under Mr. MARSH'S supervision. See these *Publications*, Vol. XXI, p. 203.

cloud had passed by and the Moon was dark. The comet was further west than I expected. It was a good deal larger than I expected and of a milky color, but quite bright, and the tail streamed out for a long distance and was very beautiful. It seemed like a great horse's tail streaming out. The comet seemed to travel very fast. In my excitement I forgot all about the time, but was wishing all the time I had someone with me who understood more about it.

It was a beautiful sight. The sky up high was perfectly clear, but low down great banks of fog were rolling. I watched the comet until it dove into the fog bank to the west and was gone, but the tail shone out for quite a while.

I went to bed, slept good, and started home at 7 A. M. I had a hard time going down on the snow, as it was frozen so hard, but I got to the power plant (10 miles from town) at 2 o'clock. My wife had sent a team for me and I was in Lone Pine at 4:30. I made the trip in good shape and alone, which I will admit was foolish, but all who had promised to go with me backed out. I was well repaid for my trip, but wished some one had been with me to enjoy it.

Yours truly, G. F. MARSH.

Appendix F

OBSERVATION OF HALLEY'S COMET FROM MOUNT WHITNEY

Popular Astronomy 19:578 (1911)

Observing Halley's Comet from the Summit of Mount Whitney.—In the *Publications of the Astronomical Society of the Pacific* for October 1911 Dr. Aitken refers to the fact that Mr. G. F. Marsh, of Lone Pine, at the foot of Mt. Whitney, made the ascent of the mountain for the purpose of viewing from its summit Halley's comet and the total eclipse of the Moon on May 23, 1910. Dr. Aitken says "so far as I am aware, Mt. Whitney is by far the highest point on the earth's surface to which any one has climbed for the sake of seeing a comet, and a record of the fact seems of interest."

The following extract from a letter from Mr. Marsh to Dr. Aitken will be of interest to our readers. After describing the difficulties of the day and a half journey Mr. Marsh says: "I made good time and got to the top of Mt. Whitney [14,500 feet] at about 11 a. m., just the time I thought I would. I found the building in good shape and everything as I had left it. I made a fire, but did not feel hungry. I fixed my signal and waited till 11:45, the time I was to signal to my wife. I opened the shutter and immediately got a flash from Lone Pine. Then I gave my signal —1.2— and got 1.2 in return. I also got signals from several parts of town, showing that they were on the lookout for me, as a few said I would never get there.

"I fixed up good for the night, read the weather report of 23 below zero, and fixed up a signal fire of old paper and chips so I could signal at night, but it started to cloud up and looked like storming. Heavy banks of haze formed to the west and at sundown the whole sky was cloudy and I thought it was all off. At 7:30 p. m. it cleared and I lit my fire. Clouds drifted across but I got an answer from Lone Pine.

"I was getting anxious about the moon and the comet when the clouds began to break. I commenced to look for the comet but the clouds bothered. Pretty soon the cloud raised and I saw the moon about half covered, and in watching it so close I almost forgot the comet. I watched the Moon until it was almost covered, then I saw the tail of the comet. Then all of a sudden the comet showed in plain view. The cloud had passed by and the moon was dark. The comet was further west than I expected. It was a good deal larger than I expected and of a milky color, but quite bright and the tail streamed out for a long distance and was very beautiful. It seemed like a great horse's tail streaming out. The comet seemed to travel very fast. In my excitement I forgot all about the time, but was wishing all the time I had someone with me who understood more about it. It was a beautiful sight. The sky up high was perfectly clear, but low down great banks of fog were rolling. I watched the comet until it dove into the fog bank to the west and was gone, but the tail shone out for quite a while."

My copy, of the above article came from Mary Chibnall, Assistant Librarian, Royal Astronomical Society, London, England.
However, Popular Astronomy was an American publication.

Appendix F

OBSERVATION OF HALLEY'S COMET FROM MOUNT WHITNEY

THE COMET BOOK

Chapman & Brandt
Jones and Bartlett Publishers, Inc.
Boston Portola Valley 1984
The Promise of Halley, Chapter 10, pp. 119-120

California's Mount Whitney, at 14,494 feet, is the highest peak in the contiguous 48 states. It towers a mere 60 feet over Colorado's highest peak, Mount Elbert. It is a fairly easy climb to reach the top of Mount Whitney today. However, in 1910, when Mr. G. F. Marsh of Lone Pine, California, a town of under 2000 souls at the foot of Whitney, decided to climb the mountain to observe both the total lunar eclipse of May 23 and Halley's comet …, he was faced with a difficult day and a half trip. He did make it to the top, and he set up camp. Here is the rest of the story in his own words.

> I fixed up good for the night, read the weather report of 23 below zero, and fixed up a signal fire of old paper and chips so I could signal at night, but it started to cloud up and looked like storming. Heavy banks of haze formed to the west and at sundown the whole sky was cloudy and I thought it was all off. At 7:30 P. M. it cleared and I lit my fire. Clouds drifted across but I got an answer from Lone Pine.
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We can just imagine the thrill of the sight that Mr. Marsh saw. The sky seen from the 14,000-foot mountain is crystal clear, and in 1910 it was unaffected by air pollution and city lights. In 1985-1986 when Halley returns, it will be more difficult to find any spot on earth where such a magnificent view is possible. Like Mr. Marsh, we will have to seek some locale away from large cities and with clear, dark skies to see Halley in all its glory.

* Popular Astronomy 19:578 (1911) [See the previous page.]

Appendix G

BACKGROUND OF THE SCIENTIST

that were the first to use
the the trail to the summit of Mount Whitney

Appendix G

MOUNT WHITNEY SCIENTIST

Professor Samuel Pierpont Langley in 1881, Dr. Alexander G. McAdie in 1903, and C. G. Abbot & W. W. Campbell in 1908 recommended that a observatory/shelter be built on the summit of Mount Whitney. Dr. C. D. Walcott, Secretary of the Smithsonian Institution, arranged for funding and a shelter for observers was built in 1909. Campbell headed the effort to pull together the plans & materials needed for the shelter and Gustave F. Marsh was the superintendent for its construction.[38]

Dr. Charles Greeley Abbot (1872-1973) was the Director the Smithsonian Institution Astrophysical Observatory (1907–1944) during the period before and after the shelter was built on the summit of Mt. Whitney. Also, he was the Secretary of the Smithsonian Institution, (1928–1944).[39] Abbot investigated solar energy and many of its possible uses from the late 19th century until his death. Dr. Abbot is considered by many to have been the father of modern solar-energy use.[40]

Dr. William Wallace Campbell (1862-1938) was an American astronomer. Campbell is best known for his abilities as an observer and a designer of observational techniques while staff astronomer (1891-1901) and then director (1901-1930) of the Lick Observatory in California. Campbell served as president of the University of California (1923-30) and of the National Academy of Sciences (1931-35).[41]

Dr. Alexander G. McAdie (1863-1943) visited the summit of Mount Whitney in 1903 and reported to the chief of the Weather Bureau that it was most suitable for a meteorological observatory[42]

"McAdie, Mount (4,206 m.–over 13,760) … Alexander G. McAdie, scientist and writer; in charge of the US Weather Bureau in San Francisco, 1903-13; Professor of meteorology at Harvard, 1913-31. "Our party (J. E. Church) had the honor of naming the peak directly south of Lone Pine Pass Mt. McAdie, to commemorate your services in advancing the science of climatology.""[43]

Dr. J. E. Church, Jr. (1860–1957), University of Nevada, Reno. In 1906-08, he developed snow survey techniques now used throughout the world to forecast snow melt runoff.[44] . A meteorologist and west's outstanding snow expert.[45] He was a Meteorologist at the Agriculture Station, University of Nevada and the President of the International Commission of Snow and Glaciers.[46]

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[38] Francis Farquhar, *History of the Sierra Nevada,* (Berkeley, CA: University of California Press, 1965), pp.180–183.

[39] Biographical Memoirs, National Academy of Sciences, By David H. Devorkin, 1973.
URL: bob.nap.edu/html/biomems/cabbot.html.

[40] CD: Grolier Multimedia Encyclopedia, Release 6. 1993.

[41] CD: Grolier Multimedia Encyclopedia, Release 6. 1993.

[42] Francis Farquhar, *History of the Sierra Nevada,* (Berkeley, CA: University of California Press, 1965), p.182.

[43] Peter Browning, *Place Names of the Sierra Nevada* (Berkeley, CA: Wilderness Press, 1986), pp. 140–141. (Letter, J.E. Church, Jr. to McAdie, March 18, 1905 , in SCB (Sierra Club Bulletin) 5, no 4, June 1905: 317).

[44] CD: Grolier Multimedia Encyclopedia, Release 6. 1993.

[45] Crispen Wood, *A History of Mount Whitney*, (Stockton, CA: College of the Pacific, 1955), p. 50.

[46] Dr. J. E. Church, Jr., The Human Side of Snow, *The Scientific Monthly,* March, 1943, Vol LVI, pp. 211-231.

Appendix H

LETTER OF APPRECIATION TO GUSTAVE F. MARSH

from C. D. Walcott, Secretary, Smithsonian Institution

Appendix H

LETTER OF APPRECIATION TO MARSH FROM THE SMITHSONIAN INSTITUTION

ALL CORRESPONDENCE SHOULD BE ADDRESSED TO THE SECRETARY

SMITHSONIAN INSTITUTION.
Washington, U.S.A.

UNITED STATES NATIONAL MUSEUM
INTERNATIONAL EXCHANGES
BUREAU OF AMERICAN ETHNOLOGY
NATIONAL ZOOLOGICAL PARK
ASTROPHYSICAL OBSERVATORY

September 24, 1909.

Dear Sir:

I have just received a letter from Mr. Abbot, in which he speaks in the highest terms of your services in connection with the building of the shelter on Mt. Whitney, and I write to assure you of the hearty appreciation of this Institution of your efforts in its behalf, as I feel sure that but for your interest and zeal, the many difficulties could not have been overcome.

Very respectfully yours,

Secretary.

Mr. G. P. Marsh,
Lone Pine,
California.

Appendix I

SUMMARY OF REFERENCES FOR "GUSTAVE F. MARSH & MOUNT WHITNEY"

Appendix I

SUMMARY OF SOURCES REGARDING "GUSTAVE F. MARSH & MOUNT WHITNEY

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record Saga of Inyo County — **source#** **1**

doc#

author Chapter 183, Southern Inyo AARP — **search#** 241

publisher Taylor Publishing Company — **pub loc** Covina, CA — **pub date** 1977

note Has the script for "Man Against the Mountain." ..see page 43 thru 48...(also, see source #67).↵
The "man" is Marsh. ..Also, has Mt. Whitney trail info.

---

record Up in Our Country — **source#** **8**

doc# 82

author George Palmer Putnam ..1887 -- 1950 — **search#** 248

publisher Duell, Sloan & Pearce (C 1950) — **pub loc** New York, NY — **pub date** 1950

note See pages 114 & 115. ..Has a Marsh quote: .."Englishmen you meet seem to be going home. ..Americans appear always to be on their way to the office." ..Also, mentions Marsh's garden and the shelter built by Marsh on the summit of Mt. Whitney.

---

record History of the Sierra Nevada — **source#** **15**

doc#

author Francis Farquhar — **search#** 255

publisher University of California Press — **pub loc** Berkeley, CA.. — **pub date** 1965

note pages 182 & 183 mention Marsh, the Trail & the shelter on Mt. Whitney.

---

record Inyo Independent ...31 Dec 1901 — **source#** **16.01**

doc#

author — **search#** 372

publisher Inyo Independent newspaper — **pub loc** Independence, CA.. — **pub date** 12/31/1901

note Marriage of Marsh & Dodge on 11 Dec 1901↵

---

record Inyo Independent ...10 Jul 1903 — **source#** **16.02**

doc#

author — **search#** 373

publisher Inyo Independent newspaper — **pub loc** Independence, CA.. — **pub date** 7/10/1903

note 10 Jul 1903→ Marsh granted permission to build telephone line↵

SUMMARY OF SOURCES REGARDING "GUSTAVE F. MARSH & MOUNT WHITNEY

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record Inyo Independent…5 Aug 1904 **source#** **16.03**

doc#

author **search#** 374

publisher Inyo Independent newspaper **pub loc** Independence, CA.. **pub date** 8/5/1904

note 5 Aug 1904, Trail was completed last Sunday, 7/18/1904. McAdie says with possible exception of some mules which have scaled the Andes, Mt. Whitney climbers have gone higher than any mules in the world.…*Examiner*.

---

record Inyo Independent…26 Aug 1904 **source#** **16.04**

doc#

author **search#** 375

publisher Inyo Independent newspaper **pub loc** Independence, CA.. **pub date** 8/26/1904

note A thanks to people of Lone Pine, Independence & Keeler for contributions and help for the trail..Also, a listing of expenses & income is shown.

---

record Inyo Independent…28 May 1909 **source#** **16.05**

doc# 65

author **search#** 376

publisher Inyo Independent newspaper **pub loc** Independence, CA.. **pub date** 5/28/1909

note 5/28/09..Mt. Whitney Ball to raise funds to repair the trail,..5/22/09..Also, the article has a short history from 1903 to 1909 regarding the trail.

---

record Inyo Independent,..26 Aug 1938 **source#** **16.06**

The Mount Whitney Story, Death Valley Days

doc#

author Ruth C. Woodman for the Pacific Coast Borax Company **search#** 379

publisher Inyo Independent **pub loc** Independence, CA. **pub date** 8/26/1938

note The 26 Aug 1938 issue says it was released over the red network (NBC,..KFI,) 12 Aug 1938..Gustave Marsh is said to be in the story..Dixon (source #77) said a principal character was Marsh.
Source# 85 has more information.

---

record Inyo Independent…25 October 1912 **source#** **16.07**

Independence, Inyo County, California

doc#

author **search#** 384

publisher Inyo Independent newspaper **pub loc** Independence, CA.. **pub date** 10/25/1912

note "Why you should vote for G. F. Marsh of Lone Pine for Supervisor of the Fourth District."
Has information not seen else where!
Thanks to Emilie Foster, ECM 8/4/2000.

SUMMARY OF SOURCES REGARDING "GUSTAVE F. MARSH & MOUNT WHITNEY

---

record Inyo Independent 27 May 1910 **source#** 16.08
doc#
author **search#** 391
publisher Inyo Independent newspaper **pub loc** Independence, CA **pub date** 5/27/1910
note 5/27/10 ... F. G. (G. F.) Marsh reached the summit of Mt. Whitney last Monday on 5/23/10 ... (Does not mention he saw Halley's comet & eclipse of the moon.)

---

record Inyo Independent 1 Aug 1902 **source#** 16.09
doc#
author **search#** 392
publisher Inyo Independent newspaper **pub loc** Independence, CA **pub date** 8/1/1902
note Marsh naturalized on 28 Jul 1902

---

record Inyo Independent 22 Jul 1904 **source#** 16.1
doc#
author **search#** 393
publisher Inyo Independent newspaper **pub loc** Independence, CA **pub date** 7/22/1904
note A trail for horses was completed to the summit of Mt. Whitney on 17 Jul 1904.

---

record Climbing Mount Whitney **source#** 22
doc#
author Walt Wheelock and Tom Condon **search#** 262
publisher La Siesta Press **pub loc** Glendale, CA **pub date** 1970
note Has info on page 34 re number of people that registered at the summit of Mt. Whitney in 1957, 1959 & 1969. In 1969, some 20,000 signed in at the Whitney Portal.

---

record Sierra Club Bulletin ... February 1936 ... Vol XXI, No. 1 **source#** 52
The Story of Mount Whitney (Part III)
doc# 85
author Francis P. Farquhar **search#** 342
publisher Sierra Club **pub loc** San Francisco, CA **pub date** 1936
note Has the letter from Marsh to McAdie, 22 Jul 1904 re completion of the trail to the summit of Mt. Whitney. ..... See pages 65, 68, 70 & 72 for brief mention of Marsh's work on the trail & shelter.. Page 55 notes that McAdie was with a Sierra Club outing in 1903.

SUMMARY OF SOURCES REGARDING "GUSTAVE F. MARSH & MOUNT WHITNEY

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record Sierra Club Bulletin ... January 1905 ... Vol V, No. 3 ↵ Publications of the Sierra Club, ... Number 32. **source#** 53
doc#
author Professor Alexander G. McAdie **search#** 343
publisher Sierra Club **pub loc** San Francisco, CA **pub date** Jan 1905
note See page 258: .. Letter, 22 Jul 1904, .. to McAdie from Marsh regarding the completion of the trail to the summit of Mt. Whitney.

---

record Sierra Club Bulletin ... June, 1910 ... Vol VII, No. 4 ↵ Publications of the Sierra Club ... Number 42. **source#** 54
doc#
author Charles H. Lee (p. 239) .. & .. Alexander G. McAdie (p. 248) **search#** 344
publisher Sierra Club **pub loc** San Francisco, CA **pub date** Jun 1910
note McAdie pointed out it was only occasionally that anyone attempted to climb to high elevations in the Sierra Nevada during the winter months. (Church & Marsh did it in Mar 1905.) .. see .. pages 239 & 248. Marsh to the summit of Mt. Whitney to recover the readings from the thermometers left there 8/1909.

---

record A Shelter for Observers on Mount Whitney. .. From Smithsonian Misc's Collection (Quarterly Issue), Vol. 52, Part 4, pages 499-506, with Plates LXV, LXVI. No. 1886. **source#** 55
doc# 116
author C.G. Abbot, Director of Smithsonian Astrophysical Observatory **search#** 345
publisher Smithsonian Institution **pub loc** Washington, DC **pub date** 12 Jan 1910
note Discusses Marsh's efforts on Mt. Whitney, the trail & shelter, .. see pages 500, 501 and 503, 504 & 505. ↵ Also mentions Elder, Skinner & Robinson of Lone Pine. ↵

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record A May 1910 ascent of Mount Whitney, Cal. ... Climatological Service of the Weather Bureau, Report for May, 1910, .. Department of Agriculture **source#** 56
doc# 117
author Prof. Alexander G. McAdie, District Editor, District No. 11, California **search#** 346
publisher U. S. Weather Bureau **pub loc** Washington, DC **pub date** May 1910
note See page 4. .. 23 May 1910 ascent of Mount Whitney by Gustave Marsh to read the high & low temperatures for the winter of 1909-1910. .. McAdie points out that "Mr. Marsh's feat was quite an achievement ...."

---

record The Construction of the Mt. Whitney Trail. ↵ Sierra Life 26 ... May/June 1984 ... Vol IV, No. 2 ... The magazine of the High Sierras. **source#** 58
doc#
author Mary Locker **search#** 347
publisher Pramann Publishing, .. Sandie Pramann **pub loc** Bishop, CA ... 93514 **pub date** 1984
note See pages 26 thru 31. .. Has info regarding Marsh taking over in 1903 & finishing the trail in 1904. .. Has some details not seen other places. ↵

SUMMARY OF SOURCES REGARDING "GUSTAVE F. MARSH & MOUNT WHITNEY

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record Lone Pine Union High School Year Book, Whitney Pinnacles, 1941 — **source#** 59

doc#

author The Student Body — **search#** 348

publisher The Student Body — **pub loc** Lone Pine, CA — **pub date** 1941

note Dedicated to Gustave F. Marsh, Sr. (and others), "...the pioneers responsible in large degree for the development of Secondary Education in Owens Valley and in Lone Pine....

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record Owens Valley Progress Citizen ... Friday, 3 May 1946, Vol. 34, No. 14 — **source#** 60

doc# 66

author Emory Thurston, Editor — **search#** 349

publisher Owens Valley Progress Citizen newspaper — **pub loc** Lone Pine, CA — **pub date** 3 May 1946

note Article about the passing of G.F. Marsh and his obituary.

---

record Sierra Club Bulletin ... June 1905 ... Vol V, No. 4 ↵
Publications of the Sierra Club ... Number 33. — **source#** 64

doc# 142

author J. E. Church, Jr. — **search#** 352

publisher Sierra Club — **pub loc** San Francisco, CA — **pub date** June 1905

note Letter to Professor A. McAdie, 18 March 1905, reporting weather conditions & observatory potential on Mt. Whitney. Church noted that his companion, Marsh, believed that a narrow trail could be established to facilitate year around weather observations by a man on foot. See pages 316 & 317

---

record Sierra Club Bulletin ... June 1909 ... Vol VII, No. 2 ↵
Publications of the Sierra Club ... Number 40. ↵ — **source#** 65

doc# 143

author J. E. Church, Jr. — **search#** 354

publisher Sierra Club — **pub loc** San Francisco, CA — **pub date** 1909

note Church's report re the 1905 expedition on Mt. Whitney of Marsh & Church. See pages 105 thru 118. Describes very well their winter efforts to attain the summit of Mt. Whitney. Has good insight to the character & determination of Marsh. They spent 8 days on the mountain. ↵

---

record Studying the Sun's Heat on Mountain Peaks in Desert Lands ↵
Pub. 2623 ... from the Smithsonian Report for 1920 ... pp. 145-164 — **source#** 66

doc# 148

author C. G. Abbot — **search#** 355

publisher Smithsonian Institute, GPO — **pub loc** Washington, DC — **pub date** 1922

note See pages 149 & 150. Mentions Marsh briefly in regard to Abbot's observations on Mt. Whitney in 1909 and 1910. Two of the photos used in Plate 3 of *Gustave F. Marsh & Mount Whitney* came from Plate 1 of document, #148. ..... GPO (Government Printing Office)

Appendix I

SUMMARY OF SOURCES REGARDING "GUSTAVE F. MARSH & MOUNT WHITNEY

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record Man Against the Mountain, … "The Cavalcade of America" ↲ — **source#** 67
Originally broadcast by NBC on Monday, February 17, 1947, Broadcast #511. — doc# 61

author Ruth Woodman — search# 356

publisher E. I. du Pont de Nemours & Co., Inc. **pub loc** **pub date** 17 Feb 1947

note This is a dramatization of the building of the trail and shelter on Mt. Whitney by Marsh. Radio Program prepared & produced by Batten, Barton, Dustine & Osborn, Inc. for The Du Pont Co. ↲
The Eastern California Museum in Independence, CA has a copy of the script.

---

record The Highest House in America ↲ — **source#** 68
San Francisco Chronicle Sunday, November 7, 1909, page 3 — doc# 64

author Harold French — search# 357

publisher San Francisco Chronicle newspaper **pub loc** San Francisco, CA **pub date** 11/7/1909

note Nearly a full page article about Gustave F. Marsh with pictures and text about the building of the trail and the shelter on Mount Whitney.

---

record Mount Whitney: Mountain Lore from the Whitney Store — **source#** 70
doc#

author Doug Thompson & Elisabeth Newbold — search# 360

publisher Westwind Publishing Company **pub loc** El Cajon, CA, 9202 **pub date** 1997

note Pages 55 & 57 mention the shelter built by Marsh. Pages 129 thru 132 mention Marsh: his work on the trail & shelter, his support of scientific expeditions and his own observation of Halley's comet.

---

record Sierra Club Bulletin January 1910 Vol VII, No. 3 ↲ — **source#** 72
Publications of the Sierra Club Number 41. — doc# 159

author Professor Alexander G. McAdie — search# 359

publisher Sierra Club **pub loc** San Francisco, CA **pub date** Jan 1910

note see pages 143 & 147. Quote from McAdie, page 143, "To him (Marsh) more than any other one man is due the successful completion of the trail and the building of the observatory." ↲
Also, on page 147, McAdie relates, obliquely, Church & Marsh to Muir

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record A History of Mount Whitney. Department of History, College) of the Pacific, — **source#** 73
Master Thesis (not published). — doc#

author Crispen Melton Wood — search# 362

publisher College of the Pacific **pub loc** Stockton, CA **pub date** June 1955

note Pages 48 thru 93 discusses Marsh and his efforts on Mt. Whitney. Wood references the newspaper "Inyo Independent, 15 Jul 1938" in regard to the "Mount Whitney Story" broadcast on NBC's radio program "Death Valley Days." College of the Pacific, now University of the Pacific.

SUMMARY OF SOURCES REGARDING "GUSTAVE F. MARSH & MOUNT WHITNEY

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record TO CLIMB THE HIGHEST MOUNTAIN: W. W. CAMPBELL'S 1909 MARS EXPEDITION TO MOUNT WHITNEY, from the Journal for the History of Astronomy, Vol. 20 (1989) **source#** 74 **doc#** 239

author Donald E. Osterbrock, Univ. of Calif., Santa Cruz, Lick Observatory **search#** 370

publisher Science History Publications Ltd **pub loc** England **pub date** 1989

note Marsh is referred to as a canny local politician . . . a tremendous worker and leader . . . a doughty local politician . . . . See the Journal for the History of Astronomy (JHA), Vol. 20 (1989), pp. 83, 87 & 89.
Publisher location: Chalfont St Giles, Bucks, England.

---

record Southern Sierran, Chapter Names Outings Award For Past Leader Versteeg **source#** 76 **doc#**

author John Robinson **search#** 380

publisher Sierra Club, Angeles Chapter **pub loc** Los Angeles, CA **pub date** Feb 1988

note Includes a biography of Chester Versteeg, in 1937 he named Mount Marsh & did its first ascent 25 August 1940.

---

record Letter from Mrs. H. M. Dixon **source#** 77 **doc#** 121

author Mrs. H. M. Dixon **search#** 382

publisher Mrs. H. M. Dixon **pub loc** Ft. Collins, Colo. **pub date** 8/15/1938

note Gustave Marsh is mentioned as being in the story. See source #16.06: Dixon wrote, radio program described the building of the trail up Mt. Whitney.. The principal character was a Gustave Marsh, 8/15/1938. The Dixons were living in Ft. Collins, Colo. RFD 2

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record Publications of the Astronomical Society of the Pacific, *Observing Halley's Comet from the Summit of Mount Whitney, Vol. 23, pp. 240-242, 1911* **source#** 78 **doc#** 247

author G. F. Marsh **search#** 383

publisher Astronomical Society of the Pacific **pub loc** Tempe, AZ **pub date** 8/1911

note R. G. Aitken of the Lick Observatory, wrote to Marsh for particulars of his observation of Halley's Comet and published his reply. Aitken was the Associate Director 1923-1930 and the Director 1930-1935. Tempe AZ is the source of the publication)

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record "The Comet Book" **source#** 79 **doc#**

author Robert D. Chapman & John C. Brandt **search#** 386

publisher Jones and Bartlett Publishers, Inc. **pub loc** Boston, MA **pub date** 1984

note p. 119 has part of the letter G. F. Marsh wrote to either Campbell in 1910 or Aitken in 1911 and p. 121 has a comment about the observation.
Pub. loc.: Boston, MA & Portola Valley, CA

SUMMARY OF SOURCES REGARDING "GUSTAVE F. MARSH & MOUNT WHITNEY

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record Popular Astronomy (Northfield), v.19 (1911), p. 578 **source#** **80**
doc# 250
author G. F. Marsh **search#** 387
publisher Popular Astronomy (ceased many years ago) **pub loc** U.S.A. **pub date** 1911
note A copy was obtained from the Royal Astronomical Soc., London. This was taken from R. G. Aitken's (Lick Observatory) article: Publications of the Astronomical Society of the Pacific, *Observing Halley's Comet from the Summit of Mount Whitney, Vol. 23, pp. 240-242, 1911.* See Source #78.

---

record Sierra Club Bulletin, 1904, Vol V, pp. 138-139 **source#** **83**
Publications of the Sierra Club Number 30 OR 31.
doc# 265
author G. F. Marsh to Professor Alexander G. McAdie **search#** 394
publisher Sierra Club **pub loc** San Francisco, CA **pub date** 1904
note Marsh gives a progress report re building the trail and asks McAdie for financial help from the Sierra Club. (*I do not know if the Sierra Club helped.*)

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record Researches on Solar Heat . . . A Report on the Mount Whitney Expedition. . . . **source#** **84**
Professional Papers of the Signal Service, No. XV. . . . . 12535——No. XV
doc#
author S. P. Langley (Samuel Pierpont Langley 1834-1906) **search#** 395
publisher Government Printing Office **pub loc** Washington (DC) **pub date** 1884
note Source# 55: The expedition of Langley ascended by a circuitous route from Lone Pine, which occupied several days' time and led by a series of ups and downs to Mountain Camp. Farther advance by that route with animals was then impossible and is so still (1910). *This is verified in Source # 84.*

---

record "The Story of Mount Whitney," A Death Valley Days radio broadcast, August 12, 1938, 9:30 - 10:00 P.M. (East). **source#** **85**
doc# 255
author Ruth Woodman **search#** 377
publisher Pacific Coast Borax Company, NBC, KFI **pub loc** New York, NY **pub date** 8/12/1938
note University of Oregon provided a copy of the script 1/31/02. . . . Station: Red Network. Sponsored by Pacific Coast Borax Company. Radio Production of McCann • Erickson, Inc.
The Eastern California Museum in Independence, CA has a copy of the script.

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record Publications of the Astronomical Society of the Pacific, *On the Spectrum of Mars, Vol. 21, pp. 201-205, (1909)* **source#** **86**
doc# 252
author W. W. Campbell **search#** 388
publisher Astronomical Society of the Pacific **pub loc** Tempe AZ **pub date** 1909
note "The building erected by the Smithsonian Institution, under the supervision of Mr. G. F. Marsh, a public-spirited citizen of Lone Pine, was finished on the morning of our arrival." Also, at the end "Members of the party were . . . and Messrs. G. F. Marsh and W. L. Skinner, of Lone Pine, California.

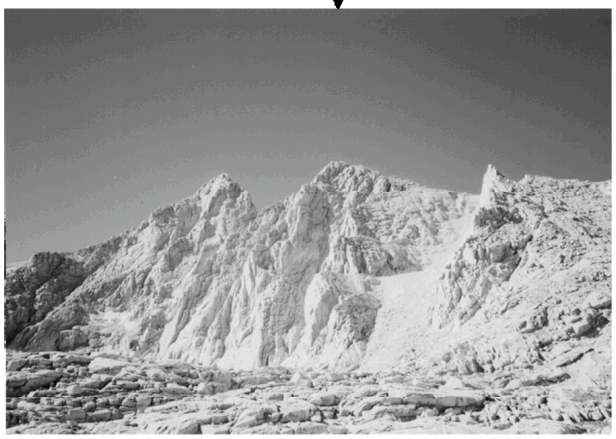
Appendix J

MOUNT MARSH

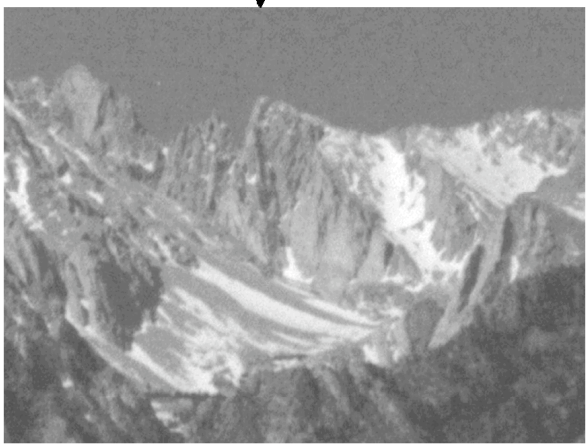
MOUNT MARSH

Mount Marsh is 1.2 mile SSE of Mount Whitney between Whitney Pass & Mount McAdie

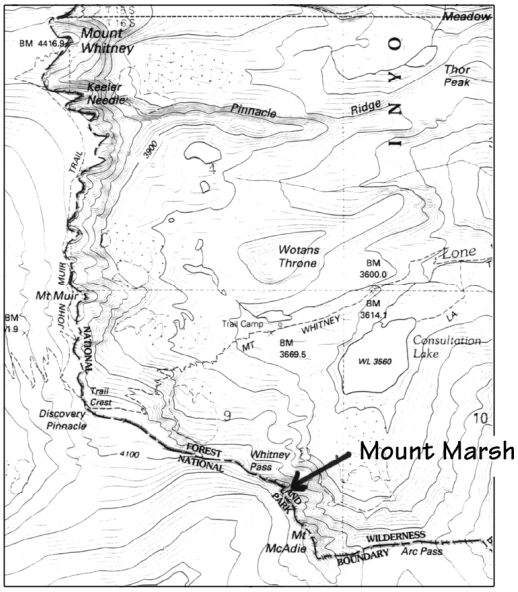
Marsh completed the trail to the summit of Mt. Whitney in 1904 & built the shelter on the summit in 1909



Mount Marsh as seen from near Consultation Lake
Photo by Robert M. Gillis of Lone Pine



Mount Marsh as seen from Highway US 395 & Moffat Road
narrow view



Mount Marsh as seen from Highway US 395 & Moffat Road
wide view

Plate #4

23 Jul 2002

UNITED STATES BOARD ON GEOGRAPHIC NAMES

In reply please use this address:
U. S. Geological Survey
523 National Center
Reston, Virginia 20192-0523

January 24, 2002

Mr. George F. Marsh
3433-B Bahia Blanca West
Laguna Woods, California 92653-2885

Dear Mr. Marsh:

We are pleased to inform you that the U.S. Board on Geographic Names, at its January 10, 2002 meeting, approved your proposal to make official the name Mount Marsh for a summit located on the boundary between Inyo County and Tulare County, and also between the John Muir Wilderness and Sequoia National Park. This decision was made in agreement with the findings and recommendations of the California Advisory Committee on Geographic Names as well as the Inyo County Board of Supervisors and the Tulare County Board of Supervisors. The new name has been entered into the Nation's official automated geographic names repository and will be published in Decision List 2002. The entry will read as follows:

> Marsh, Mount: summit; elevation 4,130 m (13,550 ft); located in Sequoia National Park and Inyo National Forest/John Muir Wilderness, 2 km (1.2 mi) SSE of Mount Whitney, 0.4 km (0.2 mi) NNW of Mount McAdie, 0.2 km (0.1 mi) ESE of Whitney Pass; named for Gustave F. Marsh (1869-1946), under whose leadership the projects to build a trail to the top of Mount Whitney and to construct a shelter on its summit were completed in 1904 and 1909, respectively; Inyo County and Tulare County, California; Sec 9,T16S,R34E,Mount Diablo Mer; 36°33'17"N, 118°16'38"W; USGS map - Mount Whitney 1:24,000.

Sincerely yours,

Roger L. Payne
Executive Secretary
U.S. Board on Geographic Names

Appendix J

MOUNT MARSH

The proposal to make official the name Mount Marsh was presented in the 17 Oct 2001 meeting by Jim Trumbly. His outstanding presentation resulted in a unanimous approval by the CACGN to recommend approval to the USBGN.

A number of items, not related to Mount Marsh, have been deleted from these minutes. Also, this document was received via the Internet and it has been translated from a Word format to a AppleWorks format.

California Advisory Committee on Geographic Names
Minutes
Wednesday, October 17, 2001
California Department of Forestry & Fire Protection
1920 20th Street, Sacramento, CA

In attendance:

Appointed Members:
Paul Veisze, Chair, Department of Fish & Game
Scott Martin, Department of Water Resources
Jim Trumbly, Department of Parks and Recreation
Dave Wagner, Department of Conservation
Eric Spry, Department of Forestry & Fire Protection

Cooperators/Advisors:
Jean Ann Carroll, USDA Forest Service
Jeff Owyang, USDI Bureau of Land Management
Vicki Lukas, U.S. Geological Survey

Docket 377 Docket 377, Region IV, Jim Trumbly: **Mount Marsh**

Synopsis (see Addendum for details):
This name is re-docketed from Docket 372. Jim reviewed the highlights of the case history and read selections from extensive email correspondence with the GNO (*Geographic Names Office*). Discussion followed, including reiteration of the Forest Service recommendation for disapproval, alternative features for the name, and the case for overriding need for the name, based on education. Jim cited several lines of evidence, including: the 40 years between Versteeg's use of the name and Gustav Marsh's activities in the area, supporting the idea of Marsh's lasting fame, Marsh's contributions to the scientific community as a basis for representation in the community of commemorative toponymy of the region, and Marsh's embodiment of the pioneer spirit and the value of this message for education in the local community. Additional discussion centered on the continued lack of clarity in the USBGN policies for determination of overriding need and that the core of the Mount Marsh controversy was essentially a federal issue. There was consensus that the *proponent* had not explicitly cited the overriding need based on education. Nevertheless, Jim was able to convince the CACGN that the quality and quantity of the case material effectively accomplished this. Lack of policy clarity notwithstanding, the CACGN voted unanimously to recommend approval of the name Mount Marsh as docketed.

Minutes submitted 2001/11/16 pveisze@dfg.ca.gov

California Advisory Committee on Geographic Names, October 17, 2001

ADDENDUM TO MINUTES

DOCKET 377 - MOUNT MARSH

Background

In January 2000, the CACGN (Committee) recommended disapproval of the commemorative name Mount Marsh on Docket 372 because it did not meet the policy requirement for wilderness names of having been "published on a base series map". Thus, the proposal was viewed as a new name and no case for overriding need was made. At the time, the proponent focused the proposal on documentation that the name was in local use from about 1940. The Committee confirmed that the name had not been published on a base series map and recommended disapproval. The USBGN voted to not approve.

In June 2001, the USBGN redocketed the name. The USBGN staff explained that the reason for redocketing was that the proponent had provided additional evidence that the hand-annotated map, considered earlier but of unknown origin, was likely that from a proposal by Chester Versteeg. Reconsideration was at least in part due to the need to see if the USBGN had previously acted on the Versteeg proposal. In the interim, additional public support was also received and the proponent submitted some further details to that already received.

On August 23, 2001, the CACGN received Errata to Principles, Policy, and Procedures, Policy IV – Wilderness Areas, which removed the phrase "on a base series map". Removal of this major stipulation, that affected the previous recommendation, refocused the Committee's attention to the policy's other criteria. This raised several issues:

Was the hand-annotated map by Versteeg ever acted upon by USBGN in any form that would be considered today as previously establishing the name Mount Marsh? In another way, was the feature proposed for naming as Mount Marsh considered by USBGN to be an unnamed feature?

From the documentation received did the USBGN staff consider the name to be "published" and therefore in local use prior to the area of the feature being designated as wilderness?

Did the proposal demonstrate that an "overriding need exists, such as for purposes of safety, education, or administration"?

The Committee found that the USBGN staff considered the Versteeg hand-annotated map to be a proposal that was not acted upon. Also, they stated that there was not sufficient evidence of the name having been published to establish that it was in local use. From the evidence the USBGN staff concluded that all documented uses of the name lead to Versteeg, that he, or a close circle of associates, were likely to be the only users of the name. Thus, the USBGN staff considers the proposal to be a new name for an unnamed feature.

The Committee then addressed the issue of overriding need.

First, the Committee had to consider if it was within its responsibility to assist the proponent since he had not made a direct case for overriding need. When contacted, the proponent said he felt the material he had submitted provided sufficient information to make a determination. The Committee found that the proposal was well researched and comprehensive. It included information regarding the earlier naming of the feature, extensive documentation of the building of the trail and the structure on the top of Mount Whitney, as well as complete biographical information on the honoree including activities and accomplishments throughout his life. The Committee agreed that it had the responsibility to assist the proponent and felt that sufficient information had been provided and a determination could be made no matter the criteria.

MOUNT MARSH

It was already clear to the Committee that an overriding need for either safety or administrative purposes was within the purview of the administering agencies, the National Park Service and United States Forest Service, and that neither agency supported such a case.

Consideration of overriding need for educational purposes was much less clear. Should the Committee rely principally on administering agencies or should a broader perspective be considered? Also at issue was the question of what constitutes an overriding need of wilderness. What factors should be considered and how should they be weighed? During the Committee's earlier deliberations the question was raised as to what the difference was between commemorative naming on wilderness lands as opposed to non-wilderness lands since all commemorative naming tends to have an educational purpose.

A request was made to USBGN staff for guidance on addressing this criterion of the Wilderness Areas Policy. The USBGN staff stated that it is difficult to have specific requirements for overriding need as this is subject to interpretation by each voting member. Without further guidance the Committee decided that the evaluation of overriding need for educational purposes should go beyond agency perspective and include the broader California and national interests. In doing so the Committee evaluated the proposal, considered possible arguments for an overriding educational need, and came to a recommendation.

Recommendation

The California Advisory Committee on Geographic Names recommends approval of the name as docketed. This recommendation for establishing a new name in federally designated wilderness is based on an overriding need for educational purposes. The name provides overriding educational opportunities in the following ways:

The community of Lone Pine and the Owens Valley may have a prominent geographic feature named locally for one of their early pioneers whose vision and unyielding effort provided access to the top of Mount Whitney, the highest geographic area in the conterminous United States. Likewise, the community may educate its citizens and visitors of Gustave Marsh's contributions and of his civic-minded spirit that helped build the community and establish it as the gateway to the Mount Whitney area;

Marsh first climbed to the top of Mount Whitney in 1901. He saw the potential for a trail to the top and the benefit it would provide for others and the community of Lone Pine. He made its reality a personal goal. Through daunting obstacles and sometimes extremely difficult conditions he accomplished his goal. Documentation of the effort largely credits Marsh with being the key force in seeing the project through.

Marsh was also involved in other community matters. He designed a distribution system for the waters of Lone Pine Creek to the town of Lone Pine. He built the first telephone line in southern Inyo County. He was a Supervisor of the 4th District in Inyo County for two years and a school board trustee for 16 years among other community involvement. From a broader perspective Marsh represents the pioneer spirit and individual vision that built communities and settled the West.

This proposal is in one respect similar to the recent Thornburg Peak wilderness name proposal (Docket 367) that was recommended by the CACGN and approved by the USBGN. In that proposal, and also with this one, the Committee found that communities such as Lone Pine that are in proximity to large tracks of wilderness are essentially deprived of their heritage of establishing geographic place names when such circumstances seem most appropriate. The Committee also found that sometimes features within the wilderness environment are as much a part of the visual environment in communities outside of the wilderness. This is one of those situations where the Committee questions the appropriateness of applying wilderness values on populated areas or, for this case, there is an overriding need.

Provides an educational opportunity to recognize the important "support role" provided by Marsh to early scientific access and achievement on the top of Mount Whitney;

Achievements are often collective efforts where supportive roles are equally important to the outcome.

Such was the case of Marsh who provided for access and assisted scientific expeditions to the top of Mount Whitney and constructed the shelter structure on top for the Smithsonian Institution in 1909. In the earliest years of scientific interest Marsh was "the guy to go to" when scientists wanted to get to the top. Between 1905 and 1913 he raised funds, reopened and repaired the access trail and assisted scientists McAdie, Campbell, Abbot, Church, Adams, and Angstrom. Marsh's value to these early scientists stemmed from his apparent personal belief in the importance of science for which his contributions were beyond personal gain.

In that the toponymy of an area can be educational about the past and sometimes a reflection of the values held by society, commemorating Marsh helps to balance an uneven naming record of the high peaks in the Mount Whitney area

There are 13 named peaks that commemorate individuals in the immediate Mount Whitney area (3 mile circle within line of sight around Mount Whitney). One is for preservationist and writer John Muir and another two for mountaineers that perished on Everest in the 1920s (Mallory, Irvine). The remaining 10 are for scientist and professors in the early part of the 20th Century (Whitney, Hale, Russell, Keeler, Hitchcock, McAdie, Le Conte, Newcomb, Chamberlin, and Young). Unlike these names Marsh is a local personality that played an important role in the opening of the Mount Whitney area and of its early scientific exploration.

Other wilderness name decisions in the High Sierra have addressed shortcomings in earlier naming conventions. The approval of Mount Anna Mills (Docket 296) recognized the early mountaineering achievements of women that were unconsidered at the time. The commemoration of Mono Jim by naming a peak in the Ansel Adams Wilderness Area (Docket 310) recognized an Indian scout who was killed with Robert Morrison in pursuit of escaped convicts. Convict Lake and Mount Morrison commemorated the historic event but the Indian was unconsidered or forgotten. A proposal to name a peak in the area was approved by USBGN in 1987 to correct the oversight.

Additional Comments

During the Committee's deliberations on the Mount Marsh proposal several significant comments and issues were raised.

Versteeg Map. The Committee had two observations about the Versteeg map.

The map proposes 24 names in the Mount Whitney region. Of these names only two, or possibly three, commemorate individuals with one of those being Marsh. The other names are descriptive or repeat previous commemorative names in the area (Tyndall) and includes names such as "Sunburst", "Polychrome", "Constellation", and Cow Heaven. Versteeg, well known for his naming proclivity, was perhaps more interested in naming than in commemorating. This may suggest the status of Marsh in association with the area.

Second, the map was submitted around 1940. This is 36 years after Marsh constructed the trail up Mount Whitney and may be an indication of his lasting fame in the area.

Name the Summit Structure. Some members of the Committee felt the most appropriate tribute to Marsh would be naming of the shelter house on top of Mount Whitney. Any pursuit of this, would be up to the proponent.

Addendum submitted 2001/10/25 jtrum@parks.ca.gov

UNIVERSITY OF NEVADA
AGRICULTURAL EXPERIMENT STATION

RENO, NEVADA
December 4, 1940

My dear friend Marsh:

Your good letter with the letter from Chester Versteeg and "Roping a Mountain Top" came in late October. They are all good inspirationally and for their news value. I shall be particularly pleased to have your Mount Marsh put higher on the skyline. It now stands in impressiveness with Mount McAdie. The old Mount Marsh seemed to be "Heaven's pinnacle" to me that day we struggled upward confident of success, which the cracks in the snow shut us off from. Those three nights in the "Eagle's Nest" as I called it at Mirror Lake were perhaps the most facinating of my life. The only others were sleeping on the inland ice of Greenland under the open sky.

I am writing Mr. Versteeg letting him know that you forwarded the pictures to me. I only wish that the pictures had more snow as you and I found the slopes on our first ascent together. Dr. Colby of the Sierra Club kindly filled out my set of Sierra Club Bulletins by giving me the two volumes of 1910. Of course you have them. If not be sure to borrow them in order to read McAdie's story of Mount Whitney Observatory and Lee's climb to Kearsarge Pass.

Please share my love with Mrs. Marsh and the children. I have not seen Maule since he and his little wife passed through two or three years ago. Perhaps it was longer than that for you say he worked four years on the Mono Tunnel. He was employed there when he called on me.

Most sincerely,

J. E. Church

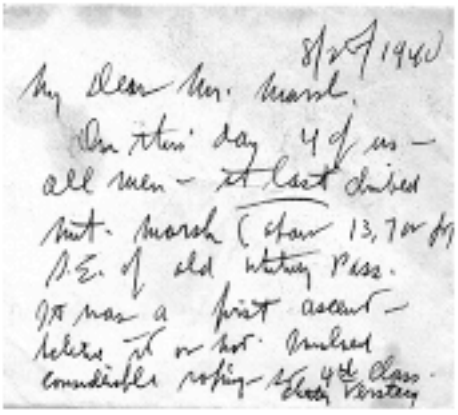
First Ascent of Mount Marsh - 25 Aug 1940

David Kruger of Lone Pine, CA climbed Mount Marsh 16 Aug 1998 & verified the register there shows the first ascent was done as shown below.

Arc Pass Mt. McAdie **Mt Marsh** Whitney Pass

READY FOR THE CLIMB. Bob Rumohr, Chester Versteeg and Andy Hennig look at their objective, Mt. Marsh, at right. It was named for G. F. Marsh of Lone Pine, builder of trail to Mt. Whitney in 1904. To the left are Mt. McAdie and Arc Pass. *(John Wiggenhorn photo)*

Los Angles Times photo, ca September 1940, Sunday Rotogravure Section



8/25/1940

My Dear Mr. Marsh,
On this day 4 of us,
all men, at last climbed
Mt. Marsh (about 13,700 ft)
S.E. of old Whitney Pass.
It was a first ascent,
believe it or not. Involved
considerable roping, some 4th class.

Chester Versteeg

Plate 5

Appendix J

MOUNT MARSH

Chester Versteeg submitted a 6 page proposal, including several names, to the U. S. Board on Geographic Names dated 20 Dec 1937. The Bancroft Library transmittal page, Versteeg's first and third pages are shown below. Page 3 has the proposal regarding Mount Marsh.

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TEL: 510 642-3781
FAX: 510 642-7589

George Marsh
3433 Bahia Blanca West #B
Laguna Woods, CA
92653-2885

Oct. 26, 2001

Dear Mr. Marsh,

In answer to your letter about Chester Versteeg's request to the USBGN regarding the naming of Mount Marsh, I believe I may have found the document you ask about. The letter is written to the U.S. Board of Geographical Names requesting the naming of Mt. Marsh in the Mount Whitney Quadrangle. It is dated Dec.20th, 1937 from Los Angeles. He lists a number of other site locations for name proposals and the Mt. Marsh description is on the third page of the letter.

This letter was found in a recently acquired collection of Chester Versteeg papers. The name and call number of the collection are: Chester Versteeg papers, 1909-1974, bulk 1921-1959. Call number: BANC MSS 96/31 c (8 Cartons). The collection is currently unarranged and unavailable for use, but can be made available for research by making prior arrangements with one of our curators to view it.

I am enclosing a copy of this 6 page letter per the suggestion of Theresa Salazar, Curator of the Bancroft Collection as a complementary reference response (no charge!). If you wish to find out more about this collection or other Sierra Club papers, please contact her at: Theresa Salazar
Curator of the Bancroft Collection
The Bancroft Library
University of California
Berkeley, CA 94720-6000
(510) 643-8153
E-mail: tsalazar@library.berkeley.edu

Sincerely,
Franz Enciso, Reference Assistant FE

Appendix J

MOUNT MARSH

< *page 1* >

Los Angeles, California.
Dec. 30th, 1937.

U. S. Board on Geographical Names,
Washington, D. C.

Attention Mr. George C. Martin.

My dear Mr. Martin;

Herewith enclosed a few topographical names in our High Sierra region of California with maps attached, for which approval is asked of your Board.

Some of these names are of long standing, but have never been offered to your Board and do not appear on the U.S.C.S Topo maps; others are new and have been worked out from circumstances or experiences in the field during the past summer. They are my own proposals to your Board.

Very sincerely yours,

Chester Versteeg
625 Pacific Mutual Bldg.,
Los Angeles.

CV:AB

PISHON QUADRANGLE-

THE GATE-
Location- as per attached map, between the two posts

Reason- In the sense of a mountain gap or natural passageway. From an elevation of 8500 feet to 9000 feet at the head of Tinemaha Creek (the logical camping spot at the head of this creek due to fact that timberline is very low in this area) and on up to 10,000 ft. elev. this great, massive gate is a striking part of the topography. During the glacial age a glacier ground its way between what are now the two Posts to make this gate. A stream now follows the ancient glacial path between the Posts.

SOUTH POST- Location- see map attached.

Reason- It stands some 700 feet above the lower lip of the Gate and about 200 ft. above the ridge which connects it with the S. E. slopes of Birch Mtn. (Proposed to your Board some time ago as Pa-o-krung).

OUNT WHITNEY QUADRANGLE-

T. ARSH-

Location- Halfway between peak I3800 and old Whitney Pass and immediately adjacent and to the left of the "P" of Whitney Pass.

Reason- Named for Gustave F. Marsh, of Lone Pine, California who, in 1904, built the first trail up Lone Pine Creek and over old Whitney Pass to the summit of Mount Whitney. This was a tremendous task requiring the utmost enthusiasm, courage and perseverance. In 1909 Marsh re-built the trail and erected on the top of Whitney the Smithsonian Institution shelter house in preparation for the "occupation" of Whitney by the joint Smithsonian Institution-Lick Observatory Expedition of the summer of 1909. Thunder storms drove the men working under him from the summit before completion of the shelter house. Oneman was, at that time, killed by lightning on the summit of Whitney. Dr. Abbot and Prof. McAdie both spoke of and wrote of the fine courage displayed by Marsh on this job and both stated that, if it had not been for Marsh, the expedition could not have occupied the summit of Whitney.

It was either during 1909 or during the winter attempt to climb Whitney in March of 1909 (a few months before theimprovement of the trail and erection of the shelter house) made by a Mr. Church and Mr. Marsh, that Mt. Marsh was named in honor of the great work of C. F. Marsh in this Whitney area.

It has long been known by this name- Mt. Marsh- to old timers.

Mr. Marsh- a grand old man- is still living in Lone Pine. The mountain was named long before the practice adopted by your Board of not naming important topographical features for men still living.

ISCOVARY PINNACLE-

Location- Peak I4777- see attached map.

Reason- Clarence King, in September, 1871, learning of the first ascent of the true Mount Whitney, proceeded up the famous Hockett Trail towards Whitney, then, leaving that Trail, crossed Siberian Pass to the head of Rock Creek. Erroneously continuing directly up to the headwaters of Rock Creek, he crossed a saddle of the divide between peak I4124 and the Sierra Crest and then climbed the south wall of the Sierra Crest at a point a short distance west of the present old Whitney Pass. Here he climbed this pinnacle- peak I4777- from which vantage point he gained not only a full view of the summit of Whitney, but also a realization that the true route to the top of Whitney was up its southwestern slopes

CHESTER VERSTEEG, A BIO

(1887-1963)

U.S.C. Law College Graduate, 1916. Practiced law for several years and then went into insurance and he became a member of the Millionaire Club. He discovered the Sierra Nevada in 1909 after graduating from high school, and it became his lifelong hobby. He became a member of the Sierra Club in 1911. Versteeg "was directly responsible for naming of some 250 peaks, passes, lakes, and meadows" in the Sierra Nevada and appears to have more Sierra first ascents than anyone except Norman Clyde. "In his later years, Chester worked on a history of the Sierra Nevada, interviewing over 400 pioneers regarding all aspects of the range." Gustave F. Marsh was one of those interviewed. A peak southwest of Mount Williamson has the name, Mount Versteeg, in the honor of Chester Versteeg (see the Mount Whitney quadrangle)

The summer after Versteeg graduated in 1909. "He and a friend embarked on a 500 mile burro trip through the Sierra. After only two weeks his friend became ill and left. Chester sold his burro in Lone Pine and continued the trip solo, hiking all the way to Yosemite … he spent the next 30 summer vacations" in the Sierra. Versteeg could have met Marsh for the first time in 1909. Marsh was working on the Mount Whitney trail when Versteeg did his first trip in the Sierra Nevada.

Much of the Bio information was taken from an article in the *Southern Sierran* (February 1988), pp. 6–7, "Chapter Names Outings Award For Past Leader Versteeg," by John Robinson. My copy of the article was provided by John Robinson.

Appendix K

Gustave F. Marsh / Mount Whitney - Correspondence Catalog

The shelter on the summit of Mount Whitney was built in August of 1909 by Gustave F. Marsh for the Smithsonian Institution. This is a Catalog of the collection of letters, on file at the Eastern California Museum in Independence, CA[47] , that have information regarding the planning for and the construction of the shelter. The letters cover Marsh's efforts on Mount Whitney from 1904 to 1913. Perhaps, this is the only collection that brings the correspondence from the three primary sources (G. F. Marsh, the Lick Observatory & the Smithsonian Institution) together in one place. Also, other letters (1904 -1940) regarding Marsh's activities in regard to Mount Whitney are included.

The collection, a total of 102 letters, came from six sources:

1. The Gustave F. Marsh records.

2. Special Collections Department, University Archives, University Library / 322
   University of Nevada, Reno, Nevada 89557-0044

3. Mary Lea Shane Archives of the Lick Observatory, McHenry Library - Room 359
   University of California, Santa Cruz, California 95064

4. Smithsonian Institution Archives, Arts and Industries Building, Room 2135
   900 Jefferson Drive SW, Washington DC 20560-0414

5. Sierra Club, William E. Colby Memorial Library
   85 Second Street, Second Floor, San Francisco, CA 94105-3441

6. U. S. Board on Geographic Names, U. S. Geological Survey
   523 National Center, Reston, VA 20192-0523

7. The Chester Versteeg records

A special thanks to:
Susan Searcy, Manuscript Curator at the University of Nevada
Dorothy Schaumberg, Curator at the University of California Santa Cruz
William Cox, Associate Archivist at the Smithsonian Institution
Caitlin Lewis, William E. Colby Memorial Library, Sierra Club
Jim Trumbly, California Advisory Committee on Geographic Names
Roger L. Payne & Jennifer Runyon, U. S. Board on Geographic Names
Mrs. Janice Hampson, daughter of Chester Versteeg

Correspondence from the Smithsonian is listed as from Walcott, Secretary of the Smithsonian Institution. Actually, some of the letters were signed by persons acting for him and several were from the Chief Clerk as will be seen in the correspondence itself.

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[47] The collection of letters is on file at the Eastern California Museum, 155 N. Grant Street, (Mailing address: POB 206) Independence, CA 93526, phones: (760) 878-0258 or (760) 878-0364
Fax: (760) 872-2712 e-mail: ecmuseum@qnet.com

Appendix K

Gustave F. Marsh / Mount Whitney - Correspondence Catalog

doc #	sort date	item	description
84	25 Jan 1904	U.S. Weather Bureau to G.F. Marsh	Reply to G.F. Marsh's request to be a volunteer weather observer
63	27 Jan 1904	U.S. Dept. of Agri. to G.F. Marsh	Data requested for allocation of costs for Irrigation Boxes
265	17 May 1904	G.F. Marsh to Prof. A.G. McAdie	Request for a few dollars to help complete the trail to the summit of Mount Whitney
237	22 Jul 1904	G.F. Marsh to Prof. A.G. McAdie	Informs McAdie of the completion of the trail to Mt. Whitney
162	10 Jan 1905	G.F. Marsh to J.E. Church	Agrees to be a guide to summit of Mt. Whitney
122	22 Jan 1905	J.E. Church to G.F. Marsh	Planning for trip to Mt Whitney
163	27 Jan 1905	G.F. Marsh to J.E. Church	More planning for trip to Mt Whitney
164	12 Feb 1905	G.F. Marsh to J.E. Church	More planning for trip to Mt Whitney
165	16 Feb 1905	G.F. Marsh to J.E. Church	Weather info re planned trip to Mt Whitney
166	24 Feb 1905	G.F. Marsh to J.E. Church	More planning for trip to Mt Whitney
224	20 Jul 1905	U.S. Dept. of Agri. to G.F. Marsh	Planning for a July 1905 expedition.
167	29 Sep 1905	G.F. Marsh to J.E. Church	Thanks for photo & gives info re his activities
149	11 Jun 1908	W.W. Campbell to G.F. Marsh	Requests Marsh to assist him to the summit of Mt. Whitney in 1908 & 1909.
150	14 Jun 1908	G.F. Marsh ltr to W.W. Campbell	Agrees to assist regarding the 1908 / 1909 trips.
225	26 Jun 1908	W.W. Campbell to G.F. Marsh	Planning for a August 1909 expedition.
145	26 Aug 1908	Lick Observatory, Statement	Statement of charges for taking Campbell & Abbot to the summit of Mt. Whitney
226	2 Sep 1908	W.W. Campbell to G.F. Marsh	Plan to go ahead for a shelter on the summit of Mt. Whitney
227	19 Sep 1908	W.W. Campbell to G.F. Marsh	Planning for a shelter on the summit of Mt. Whitney
171	18 Dec 1908	C.D. Walcott to G.F. Marsh	Smithsonian's initial query to G.F. Marsh re trail to summit of Mt. Whitney.
172	5 Jan 1909	G.F. Marsh to C.D. Walcott	Marsh indicates he is willing to take on the project.
173	13 Jan 1909	C.D. Walcott to G.F. Marsh	Smithsonian's initial planning for a shelter on the summit of Mt. Whitney.
174	23 Jan 1909	G.F. Marsh to C.D. Walcott	Gives names of packers for transporting materials for the shelter
175	8 Feb 1909	C.D. Walcott to G.F. Marsh	Informs Marsh requests for bids were sent to the packers.
176	14 Feb 1909	G.F. Marsh to C.D. Walcott	Offers to be the agent / superintendent for the Smithsonian.
177	18 Feb 1909	C.D. Walcott to G.F. Marsh	Sends a blue print and requests recommendations for a superintendent.
178	24 Feb 1909	C.D. Walcott to G.F. Marsh	More details re the construction and for a agent / superintendent
179	4 Mar 1909	G.F. Marsh to C.D. Walcott	More discussion regarding what & how to do the shelter.
228	6 Mar 1909	W.W. Campbell to G.F. Marsh	Campbell recommended Marsh to be appointed superintendent.
180	15 Mar 1909	C.D. Walcott to G.F. Marsh	Marsh's offer is accepted if the shelter is to be built.... Project is on hold!
182	20 Mar 1909	G.F. Marsh to C.D. Walcott	Telegram with Overhulser's bid for 5¢ per lb.
181	21 Mar 1909	G.F. Marsh to C.D. Walcott	Marsh agreed that reasonable packer bids must be found and set out to get them.
183	21 Mar 1909	G.F. Marsh to C.D. Walcott	Telegram with Robinson's bid to pack for the expedition.
229	26 Mar 1909	W.W. Campbell to G.F. Marsh	Campbell keeping contact and gives a pep talk.
184	30 Mar 1909	C.D. Walcott to G.F. Marsh	The Shelter project is no longer on hold.
185	11 Apr 1909	G.F. Marsh to C.D. Walcott	Recommends Robinson be awarded the contract.
186	12 Apr 1909	C.D. Walcott to G.F. Marsh	Telegram requesting Marsh's recommendation for a packer.
187	13 Apr 1909	G.F. Marsh to C.D. Walcott	Telegram - Recommends Robinson be awarded the contract.

Appendix K

Gustave F. Marsh / Mount Whitney - Correspondence Catalog

doc #	sort date	item	description
188	23 Apr 1909	C.D. Walcott to G.F. Marsh	Material about to be shipped. How should the money be made available?
189	30 Apr 1909	C.D. Walcott to G.F. Marsh	Cooking outfit has been shipped, let us know when it arrives.
190	3 May 1909	G.F. Marsh to C.D. Walcott	Robinson has the contract for consideration, put money for shelter in the Bishop Bank.
191	4 May 1909	C.D. Walcott to G.F. Marsh	Details & spec's for building the shelter
192	12 May 1909	G.F. Marsh to C.D. Walcott	Got the construction details, Dance planned for 22 May 1909.
230	19 May 1909	C.G. Abbot to G.F. Marsh	Provided copies of Robinson's agreements to do the packing
232	26 May 1909	W.W. Campbell to G.F. Marsh	Wants guidance re shipping materials vs starting the freighters.
193	27 May 1909	G.F. Marsh to C.G. Abbot	Overhulser will forget the loss to Robinson. Details given regarding the Dance/Ball.
194	4 Jun 1909	G.F. Marsh to C.D. Walcott	The cooking outfit arrived OK. The Dance/Ball cleared $104 for the trail.
195	4 Jun 1909	C.D. Walcott to G.F. Marsh	A bronze plate has been shipped to be placed on the shelter.
196	7 Jun 1909	C.D. Walcott to G.F. Marsh	The bill of lading for the bronze plate is enclosed.
231	15 Jun 1909	C.G. Abbot to G.F. Marsh	Info re Campbell's responsibilities. Limitations re use of the Smithsonian funds.
127	21 Jun 1909	W.W. Campbell to G.F. Marsh	Mt. Whitney Shelter bills of lading
197	19 Jul 1909	C.D. Walcott to G.F. Marsh	Keys for shelter have been forwarded to you from Campbell.
198	22 Jul 1909	C.D. Walcott to G.F. Marsh	Telegram: Pay Abbot's freight bill & a check for $500 was mailed you today.
199	22 Jul 1909	C.D. Walcott to G.F. Marsh	Instructions regarding the enclosed $500.
151	1 Aug 1909	G.F. Marsh to W.W. Campbell	A progress report regarding the trail & shelter activities.
152	6 Aug 1909	Mrs. G.F. Marsh to W.W. Campbell	A progress report regarding the construction of the shelter.
153	11 Aug 1909	Mrs. G.F. Marsh to W.W. Campbell	A progress report regarding the construction of the shelter & receipt of boxes.
146	5 Sep 1909	Lick Observatory, Statement	Statement of charges for taking Campbell Expedition to the summit of Mt. Whitney
200	10 Sep 1909	G.F. Marsh to C.G. Abbot	Enclosed the bills and explanations for the missing bills, etc..
125	24 Sep 1909	G.F. Marsh Commendation, Smithsonian	Commendation re Marsh's efforts to build the Shelter on the Summit of Mt. Whitney
202	9 Oct 1909	C.D. Walcott to G.F. Marsh	A check and request for more details regarding the expenditures
124	16 Oct 1909	Mt. Whitney Shelter labor statement	Work on building on Mt. Whitney, statement of labor charges
203	12 Nov 1909	C.D. Walcott to G.F. Marsh	Request for Seymour & Robinson to provide more information re their bill.
204	6 Dec 1909	C.D. Walcott to G.F. Marsh	Remind Seymour & Robinson about the provisions of the contract.
205	2 Jan 1910	G.F. Marsh to C.D. Walcott	Seymour & Robinson to submit a new bill per the contract.
206	2 Jan 1910	G.F. Marsh to C.G. Abbot	An explanation of charges and concern re payments not received.
207	20 Jan 1910	C.D. Walcott to G.F. Marsh	Partial payment and a letter to the So. Pacific Agent for the balance.
208	24 Feb 1910	G.F. Marsh to C.D. Walcott	Request to allow Skinner & Dr. Williamson to use the shelter.
209	3 Mar 1910	C.D. Walcott to G.F. Marsh	Approval for Skinner & Dr. Williamson to use the shelter.
210	24 May 1910	G.F. Marsh to Prof. A.G. McAdie	Min/max temp's: min = 23° below zero, max = 55°
211	2 Jun 1910	G.F. Marsh to C.G. Abbot	Information regarding the condition of the shelter on 23-24 May 1909.
212	3 Jun 1910	G.F. Marsh to C.G. Abbot	Planning for Abbot's Aug 1910 trip to the summit of Mt. Whitney.
154	5 Jun 1910	G.F. Marsh to W.W. Campbell	"The report on file" regarding Haley's Comet & the eclipse of the moon.
155	11 Jun 1910	W.W. Campbell to G.F. Marsh	Found letter of 5 June 1910 to be of unusual interest & may publish part of it.

Appendix K

Gustave F. Marsh / Mount Whitney - Correspondence Catalog

doc #	sort date	item	description
207	20 Jan 1910	C.D. Walcott to G.F. Marsh	Partial payment and a letter to the So. Pacific Agent for the balance.
208	24 Feb 1910	G.F. Marsh to C.D. Walcott	Request to allow Skinner & Dr. Williamson to use the shelter.
209	3 Mar 1910	C.D. Walcott to G.F. Marsh	Approval for Skinner & Dr. Williamson to use the shelter.
210	24 May 1910	G.F. Marsh to Prof. A.G. McAdie	Min/max temp's: min = 23° below zero, max = 55°
211	2 Jun 1910	G.F. Marsh to C.G. Abbot	Information regarding the condition of the shelter on 23-24 May 1909.
212	3 Jun 1910	G.F. Marsh to C.G. Abbot	Planning for Abbot's Aug 1910 trip to the summit of Mt. Whitney.
154	5 Jun 1910	G.F. Marsh to W.W. Campbell	"The report on file" regarding Haley's Comet & the eclipse of the moon.
155	11 Jun 1910	W.W. Campbell to G.F. Marsh	Found letter of 5 June 1910 to be of unusual interest & may publish part of it.
213	5 Jul 1910	G.F. Marsh to C.G. Abbot	More planning for Abbot's Aug 1910 trip to the summit of Mt. Whitney.
156	10 Jul 1910	G.F. Marsh to W.W. Campbell	Provides information requested regarding the tail of Comet Halley.
129	14 Jul 1910	C.G. Abbot to G.F. Marsh	Planning for Aug 1910 trip to summit of Mt. Whitney.
130	21 Jul 1910	C.G. Abbot to G.F. Marsh	More planning for Aug 1910 trip to summit of Mt. Whitney.
214	24 Jul 1910	G.F. Marsh to C.G. Abbot	More planning for Aug 1910 trip to the summit of Mt. Whitney.
215	8 Sep 1910	C.D. Walcott to G.F. Marsh	A request for more detail of charges for Abbot's trip in August 1910.
216	5 Jan 1911	C.G. Abbot to G.F. Marsh	A request for an explanation of charges for Abbot's trip in August 1910.
219	6 Apr 1911	C.D. Walcott to G.F. Marsh	The Institution will match (up to) $250 raised locally to improve the trail.
217	27 Apr 1911	G.F. Marsh to C.D. Walcott	This appears to be an answer to a ltr requesting improvements to the trail.
218	5 May 1911	C.D. Walcott to G.F. Marsh	I am glad re good prospect for the Mt. Whitney Trail.
157	1 Aug 1911	G.F. Marsh to R.G. Aitken	A second report re trip & observations of comet & moon.
158	19 Sep 1911	R.G. Aitken to G.F. Marsh	Thanks for Gustave's (1911) report re 1910 observations of comet & moon.
220	24 Jun 1912	G.F. Marsh to C.D. Walcott	Matching $250 for trail improvements still holds for this year?
221	28 Jun 1912	C.D. Walcott to G.F. Marsh	The Institution is still willing to match (up to) $250 raised locally to improve the trail.
222	20 Feb 1913	G.F. Marsh to C.D. Walcott	Nothing was done on the trail last year.
223	12 Mar 1913	C.D. Walcott to G.F. Marsh	If the trail is passable the Angstrom expedition will go forward in August.
233	8 Jul 1913	C.D. Walcott to G.F. Marsh	Planning for the Angstrom & Weather Bureau expedition of 1913.
234	10 Jul 1913	C.D. Walcott to G.F. Marsh	Hydrogen gas has been shipped for the Mt. Whitney expedition.
235	29 Jul 1913	C.D. Walcott to G.F. Marsh	Smithsonian matches local money for trail improvements.
62	10 Sep 1913	C.D. Walcott to G.F. Marsh	Authorization to paint & put a stove in the shelter on Mt Whitney.
236	1 Sep 1921	W. Adams of Mt. Wilson Observatory	Walter Adams request for the loan of the key to the Mt. Whitney shelter.
242	8 Oct 1922	G.F. Marsh to Chester Versteeg	information re the Mt. Whitney - Cottonwood region
243	14 Oct 1922	Chester Versteeg to G.F. Marsh & back	Clarifications re the 8 Oct 1922 letter.
126	19 Oct 1922	G.F. Marsh Commendation, USFO	Commendation re request for verification before cashing USFO warrants.
168	2 Jan 1930	G.F. Marsh to J.E. Church	Thanks for aero photo of Mt. Whitney & tells of his activities.
121	15 Aug 1938	H.M. Dixon to G.F. Marsh	Query re 1938 radio program (NBC, Death Valley Days, The Mt. Whitney Story) & G.F. Mars
131	5 Feb 1940	J.E. Church to C. Versteeg / G.F. Marsh	Info re the Church & Marsh trip to Mt Whitney (1904-1905).
118	4 Dec 1940	J.E. Church to G.F. Marsh	Notes re Mt. Marsh photo's & their trip on Mt Whitney, winter of 1904-1905.
257	24 Jan 2002	USBGN to George F. Marsh	The name Mount Marsh was made official by the USBGN, 10 Jan 2002

Appendix L

A CHRONOLOGY OF EVENTS / GUSTAVE F. MARSH

Appendix L

GUSTAVE FRANCIS MARSH (1869-1946)
CHRONOLOGY OF EVENTS
21 Jul 2002

1869	Born in Morton cum Fiskerton, Nottinghamshire, England 3/26/1869
1890	Came to the United States 1/17/1890
1890	Declared intention to become a U. S. citizen in Glenwood Springs, Colorado 8/5/1890. He worked in the mines there & in Wyoming.
1890s	Drove a freight stage between San Diego and Los Angeles, California
1890s	Worked in a mine in Jail Canyon, Panamint Mountains, California
1900	Gus Marsh found in Ballarat, California in the 1900 U. S. Census
1901	G. F. Marsh sold to E. L. Cross an undivided 1/2 interest in the Sooner Mine near Ballarat for $500.
1901	Marsh's first ascent to the summit of Mt. Whitney, recognized the value of a trail to the Nation & to the economy of the community.
1901	Married Elizabeth M. Dodge of Lone Pine, 12/11/1901.
1902	Admitted to citizenship, Independence, Inyo County, California, 7/28/1902.
1902	Designed a distribution system for the water of Lone Pine Creek to implement a Court Order, Boland vs Lone Pine, et al.
1902	Took over the stage line between Lone Pine & the Mt Whitney narrow gauge railroad station.
1903	Birth of their first child, Gustave Francis, Jr., 3/21/1903.
1903	Built the first telephone line in southern Inyo County
1903	[McAdie with the Sierra Club outing to Mt Whitney recommended the top as most suitable for an observatory. Also, Langley recommended it for an observatory in 1881.]
1903	Took over the construction of the trail to the summit of Mt. Whitney, driven off by a severe winter storm before it could be completed.
1904	Completed the construction of the trail to the summit of Mt. Whitney, 7/17/1904. He spent a total of 24 days, all above 13,000 feet, on the last 3 miles of the trail.
1905	Birth of their second child, Blanche Garland, 1/19/1905
1905	Attempted to ascend Mt. Whitney in the winter with Prof. Church of the University of Nevada. They were on the mountain for 8 days in March, 1905.
1905	Guided Frank Adams of the U. S. Dept. of Agriculture to the summit for evaporation measurements.
1908	Guided Dr. William Campbell of the Lick Observatory & Dr. Charles Abbot, of the Smithsonian Institution to the Summit of Mt. Whitney where they decided it was an excellent location for scientific observations, but needed a shelter for protection from the elements.
1909	Marsh raised funds for & put the trail in good repair and he built the shelter on the summit of Mt. Whitney for the Smithsonian Institution. Marsh was on the summit 43 days, 30 days continuously.
1910	Birth of their third (and last) child, Maule Whitney, 3/21/1910.
1910	He climbed to the summit alone in winter conditions to observe Halley's Comet, a total eclipse of the Moon and to read the recording thermometers left there last August by Prof. McAdie.
1910	Guided Dr. Abbot to the top again, they were on the top 15 days to make more solar measurements.

Appendix L

GUSTAVE FRANCIS MARSH (1869-1946)
CHRONOLOGY OF EVENTS
21 Jul 2002

1912	Campaigned to be the 4th District Supervisor of Inyo County
1913	Did extensive repairs to the trail with a 20 man crew for weeks.
1913	Guided Dr. Anders J. Ångström of the Smithsonian Institution & representatives of the U. S. Weather Bureau to the summit of Mt. Whitney for scientific observations.
1914	Was a member of the Knights of Pythias & held several positions in that organization over a number of years.
1915	Built a new home after setting aside the old Dodge home.
1918	Supervisor of the 4th District, Inyo County, 1918-1920.
1919	Was on the school board of trustees for 16 years. He was the President of the board when his son, Gus (1922) and his daughter-in-law to be, Zoe Chambers (1923) graduated.
1920	Member of the board of The Motor Carriers Association for a number of years.
1920	Daughter, Blanche died at the age of 15.
1926	Silver Wedding Anniversary. First grandson, George, was born.
1930	Retired, he and Elizabeth made a trip to England and the Continent.
1935	Second trip to England with Elizabeth.
1937	Chester Versteeg submitted the name Mount Marsh to the USBGN.
1938	NBC, Death Valley Days, broadcast the radio program the "Mount Whitney Story." It included information about him and his efforts on Mt. Whitney.
1938	Second (and last grandchild) grandson, Lloyd, was born.
1940	Chester Versteeg and 3 others made a first ascent of Mount Marsh, a 13,500 foot peak between Mt. McAdie & Whitney Pass, 8/25/1940.
1946	Died & was buried at Lone Pine, California 4/20/1946. A memorial service was done by Major G. P. Putnam (widower of Amelia Earhart).
1947	NBC, Cavalcade of America, broadcast the radio program, "Man Against the Mountain," 17 February 1947. It was about Gustave's efforts regarding the trail and shelter on Mt. Whitney.
1997	A proposal was submitted to the United States Bureau on Geographic Names (USBGN) to make official the name Mount Marsh. Mt. Marsh is about 2 miles southeast of Mt. Whitney.
2000	The USBGN voted not to approve the name Mount Marsh.
2000	Additional information was submitted to the USBGN & the California Advisory Committee on Geographic Names (CACGN).
2001	The CACGN recommends approval of the proposal to make the name Mount Marsh official.
2002	Mount Marsh was approved 10 January 2002 by the USBGN and is in the National Geographic Names Database that is a part of the Geographic Names Information System (GNIS)

Appendix M

This appendix has a copy of a newspaper article taken from
The Inyo Independent issued 25 October 1912.

"WHY SHOULD YOU VOTE FOR G. F. MARSH FOR SUPERVISOR OF THE FOURTH DISTRICT OF INYO COUNTY, CALIFORNIA."

He did not win in the election of 1912, however, he did win in the 1918 election.

GUSTAVE F. MARSH CAMPAIGNS FOR SUPERVISOR

Inyo Independent Friday October 25, 1912

Independence, Inyo County, California

G. F. MARSH

(The following article was received by this paper for publication, and it is published as received, without this paper taking any responsibility in the matter.—EDITOR INDEPENDENT.)

Why you should vote for G. F. Marsh of Lone Pine for Supervisor of the Fourth District.

Because he came in answer to the many advertisements sent out by this County, he stayed because he saw the splendid opportunities offered by the wealth and resources of this beautiful valley. The wonderful scenery, the healthy climate, and the enormous productiveness of the soil induced him to make Lone Pine his permanent home.

Mr. Marsh has proved himself reliable and competent, and a hard worker. He has been your trusted servant for the past ten years. He has always stood for progress; he has never tired of boosting, and in his business as mail carrier, and being in contact with thousands of strangers, he has never missed an opportunity to pull for Owens Valley, and especially for Lone Pine. He has always had a kind word and good advice for the homesteader and new comer who came to help develope the country, and proved his assertions by raising the best crops in the valley. As a booster for Lone Pine Mr. Marsh cannot be beat and has proved by deeds what can be done by hard work and careful management. Marsh's work in building the Observatory on Mt Whitney has been praised by the leading professors of the world.

Extract from Lick Observatory, Bulletin No. 169:

"I wish to express my admiration for the skill and excellent management exercised by Mr. G. F. Marsh in erecting the observatory in the face of great difficulties."—Prof. W. W. Campbell.

Extract from Smithsonian Miscellaneous Collections, Volume 52, page 4: "I found that a few days before my coming, there had been a thunderstorm on the mountain one night. One of the men had been nearly killed by lightning or fright. All the mountain was glowing with St. Elmo fire, and they all had been very uneasy. On the following night all the workmen left Mr. Marsh and ran down the trail when another storm began. However they returned to him in a couple of days. Thanks to his grit in staying on top alone. In the face of the natural difficulties I think very few men could have carried the job to completion. Mr. Marsh will never get paid in the world for the work he did on that house. I hope the secretary will write him an appreciative letter of thanks."—C. G Abbot, Director of Smithsonian Atmospherial observatory.

Mr. Marsh has been voluntary weather observer for the past eight years, and has rendered valuable service. He also assisted in making evaporation tests between Lone Pine and Mt. Whitney under Frank Adams of the Agricultural College at Berkeley. Mr. Marsh has been connected with mining for many years and fully realizes the necessity of encouraging that industry, knowing the enormous benefits the farmers derive from such a market. As a farmer Mr. Marsh has proved what can be done on a few acres. He was instrumental in getting farmers institutes here through correspondence with Mr. Neff, which also resulted in getting the demonstration trains here for the benefit of the farmers in the valley.

Mr. Marsh installed the first telephone line in this end of the valley, and demonstrated their value, with the result that we now have connections all over the country. He has always been ready to help a friend in need. It has never been too early or too late night or day, in sickness and death when all other sources failed, you found Mr. Marsh ready to help you. He was never known to pass a stranger packing his blankets without giving him a lift His work in completing the Mt. Whitney trail and the utmost confidence his men had in him under the most trying circumstances and his straightforward business manner and his ability to get there, proves him to be well fitted for Supervisor of the fourth district.

As a road builder, the most important factor in building up the country, Mr. Marsh's experience in Colorado and Wyoming, and in his business of running the stage and handling freight for the past ten years over the roads of his district and his knowledge of the best material to use in making good roads, and his ability to get the best day's work out of a man stamps him as the most practical, competent and reliable man for the position.

Mr. and Mrs. Voter it is to your interest to get a practical man for supervisor. You can only judge a man, by his past if he has proved himself honest, practical and successful in his own business, if you have trusted him to do your personal business, you can surely depend on him to be your faithful servant in the county business. Do not condemn him because he was not born here. Vote for Mr. Marsh who is working hard every day to get new people and proving to them the possibilities of the beautiful valley.