

Location of John Muir's "First Summer" Tuolumne Camp

by Dan Styer, 13 April 2010, revised 4 April 2011; revised 1 October 2015

John Muir spent the summer of 1869 in the high Sierra herding sheep for rancher Pat Delaney [1]. From 12 August to 9 September, the herders stayed at the "Tuolumne Camp" on a meadow that inspired Muir to write "All the glacier meadows are beautiful, but few are so perfect as this one."

Muir describes the meadow's location in general terms [reference 1, last paragraph of chapter 9] as "north of the Soda Springs The sublime, massive Mount Dana and its companions, green, red, and white, loom impressively above the pines along the eastern horizon; a range or spur of grey rugged granite crags and mountains on the north; the curiously crested and battlemented Mount Hoffman on the west; and the Cathedral Range on the south". He also wrote that it was [reference 1, 11 August] "a smooth meadow full of sunshine like a lake of light, about a mile and a half long, a quarter to half a mile wide". And that on 12 August he "moved camp to the side of the glacier meadow." [2] However, the clue that enables a precise location of Muir's Tuolumne sheep camp is that on 23 August "the moon rose in most impressive majesty over the top of Mount Dana."

Any computer planetarium program [3] will show that the moon rose that evening, 96% full, at 7:47 PM (PST), 8.19° south of east. A line traced 8.19° north of west from the summit of Mount Dana [4] will thus intersect Muir's camp. Following this line on a topographic map, one encounters only one meadow of the size described by Muir. That meadow is now called Delaney Meadow, and Delaney Creek runs through it. If Muir could see this moonrise, he must have camped on the northwest edge of the meadow.

Furthermore, in a letter to Jeanne Carr [5] dated 29 May 1870, Muir writes "I lay for weeks last summer upon a bed of pine leaves at the edge of a daisy gentian meadow in full view of Mt. Dana." This confirms that Muir's camp must have been on the northwest edge of the meadow.

The intersection of this 8.19° line and the northwest boundary of Delaney Meadow gives a location of latitude 37.9101° north, longitude 119.3325° west (datum NAD83/WGS84), which is where Muir would have stood on the meadow's edge had he witnessed a moonrise dead center behind the summit of Mount Dana.

Of course, the moonrise might not have been dead center. The full moon is 0.48 degrees wide, so if the right limb of the moon had risen over Mount Dana, then Muir's location would be found by tracing an 8.43° line to its intersection with the northwest side of Delaney Meadow, an intersection that falls at latitude 37.9104° north, longitude 119.3321° west (about 51 meters northeast of the "dead center" intersection). Similarly, if the moon's left limb had risen over Mount Dana, one would trace a 7.95° line to an intersection at latitude 37.9098° north, longitude 119.3329° west (about 50 meters southwest of the "dead center" intersection).

I, personally, take guilty pleasure in being able “spy” on Muir by locating his campsite – to the accuracy of a football field – 140 years after the fact.

[1] John Muir, *My First Summer in the Sierra* (Houghton Mifflin Company, Boston, June 1911).

[2] The same meadow is described in less detail in chapter seven, “The Glacier Meadows,” of John Muir, *The Mountains of California* (Century, New York, 1894).

[3] I used “Starry Night Backyard 3.1,” but any planetarium program will give the same results.

[4] The summit of Mount Dana falls at latitude 37.8996° north, longitude 119.2213° west. That is, at Universal Transverse Mercator coordinates zone 11, easting 304698, northing 4197002. (The calculation is much easier in UTM coordinates.)

[5] William Frederic Badè, *The Life and Letters of John Muir* (Houghton Mifflin Company, Boston, 1924), chapter 7; Bonnie J. Gisell, editor, *Kindred and Related Spirits: The Letters of John Muir and Jeanne C. Carr* (University of Utah Press, Salt Lake City, 2001) page 110.