

**A UNIVERSITY IN THE WILDERNESS:
Building a Community and Culture at the New University of California**

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ABSTRACT

When the University of California moved to a permanent campus site in Berkeley, many described what they found there as a wilderness. Early faculty and students proceeded to build a campus and community, creating clubs, musical groups, fraternities, and athletics. This experience is brought to life in this essay through contemporary memoirs and campus publications, notably, the papers of a leading university family, Joseph Le Conte with his son, J.N. Le Conte, and youngest daughter, Carrie Le Conte. Through these sources, we can glimpse student life between 1880, when Carrie matriculated, and 1891, when J.N. graduated. The burgeoning campus culture embraced a distant wilderness too. The Le Conte family joined other university folks in spending summers camping in Yosemite Valley and the High Sierra. Many UC scientists, like the Le Contes, blended recreation with field research and education in the mountains. When John Muir went looking for advocates to form a "Yosemite defense association" to protect the newly created national park, he found ready organizers and supporters from the university built in the wilderness to help him form the Sierra Club.

Keywords: University of California, University History, Student Life, Joseph Le Conte, J.N. Le Conte, 1880's, University and Wilderness

In 1873, when the University of California's students and faculty moved to Berkeley from the old College of California site in downtown Oakland, many of them described what they found as a wilderness. Little more than a scattering of farmhouses greeted them, plus two new campus buildings downslope from the already established California School for the Deaf and Blind.¹ Marked for an urban future, the first two decades at this university, opened in the wilderness, stamped the small student body and faculty with a shared experience and creative drive in fleshing out campus life and building a community. In the formation of a Berkeley culture, a taste for wilderness adventure extended beyond the campus to the Sierra Nevada, with Yosemite Valley as its heart. Recreation alone was not the sole attraction. University scientists in particular found a new wild realm for discovery and education in the largely uncharted Sierra.

Though the state constitution included the intention to build a state university, the trigger to begin planning was the land grant legislation enacted during the Civil War. The 1862 Morrill Act offered the states a chance to use the proceeds from the sale of federal land to establish and endow a "Seminary of Learning:" a state university that would meet certain requirements. These included studies related to agriculture and the "mechanic arts" (engineering) plus military training. The California legislature accepted the federal land grant in 1864.

The private College of California admitted its first class in 1860 to a downtown Oakland campus. This small financially struggling liberal arts college mounted a campaign to establish a more solid footing by joining with the new state university. As part of the campaign, the college trustees offered to donate an empty hillside tract several miles north of Oakland to become the new state university's permanent home. On May 24, 1866, the trustees named this envisioned academic settlement Berkeley after the eighteenth century Anglo-Irish empiricist, George Berkeley.² The California state commission to advise on siting the university

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liked the proposed Berkeley tract very much, but also recognized the challenge of a wilderness location. They said: "This is a gem! If only we could get here."³ Nevertheless, they accepted the site.

The University of California thus emerged from a shifting political mosaic of expectations that amalgamated the liberal arts curriculum offered by the College of California with the Morrill Act fields of agriculture, engineering and military science, to which the state of California added mining. On March 23, 1869, the government enacted the Organic Act that established the University of California.

Those who settled in California recognized that they were making history and left us a record through letters, diaries, memoirs, and published writings. One of the university's first families, father Joseph Le Conte, son J. N. -- Joseph Nisbet--Le Conte, and youngest daughter Caroline (Carrie) Le Conte, drew lively pictures of life on the young university campus and of summer sojourns in the Sierra. As scientists, Joseph and J. N., with Joseph's brother John, found the Sierra a stimulating source in which to answer interesting scientific questions and to teach students and the public alike how to understand what they were seeing in the wild mountain world. The Le Conte reminiscences show us one family's experiences in which nearby and distant wildernesses were linked from the University of California's earliest days.

THE LE CONTES COME TO CALIFORNIA

What drew the first ten faculty to a new university being built on empty land at the western end of the continent? For the first and third⁴ faculty hired, the brothers John Le Conte and Joseph Le Conte, the University of California was a refuge to which they made their escape from circumstances that they found untenable.

Raised on a slave-holding plantation in Liberty County, Georgia, and devoted southerners, the brothers had interrupted careers as science faculty at South Carolina College in order to aid the Confederacy during the Civil War. When the college emptied out as its young men joined the Confederate army, physicist John took charge of Confederate Nitre and Mining Bureau, where chemist and geologist Joseph would join him. As the war entered its final stage, they became fugitives fleeing before General Sherman's Union army; and by the end of the war, they were destitute. With the aid of their newly freed African-American slaves, who grew food for them and joined Joseph in ferrying bushels of corn from plantations to the burned-out city of Columbia, the family survived.⁵ In 1866, with resumption of instruction at South Carolina College located in Columbia, now called the University of South Carolina, the brothers again began receiving salaries.⁶

At first, the Le Contes enjoyed a congenial university society, reestablishing itself as it put the horrors of war behind. But they foresaw an intolerable future when, according to Carrie Le Conte's account, "The South Carolina legislature, through its negro board of trustees, was taking the first steps to declare the [departmental] chairs vacant and to convert the University into a school for illiterate negroes."⁷ The North offered no refuge. Symbolic of the times, the National Academy of Sciences, established by Congress during the Civil War, specifically excluded anti-Union sympathizers; thus, membership was barred to the Le Contes for many years in spite of their strong reputations in the sciences. Though the Le Contes had many supportive friends among America's East Coast scientific elite, no northern university would hire them.⁸ The Le Contes briefly considered flight to Mexico but reconsidered upon hearing from Joseph's Harvard teacher, Louis Agassiz, that a new university was to be opened near San Francisco.



J. N. Le Conte

Agassiz urged the brothers to apply to the University of California, where he believed they would find less prejudice. He assured them that "We will back you with strong letters of support." Among those supporters were Harvard mathematician Benjamin Peirce, Yale chemist Benjamin Silliman, and the Smithsonian's first Secretary, Joseph Henry. An inquiry to the California Assembly's champion for the university, John W. Dwinelle, further reassured the Le Contes. He responded, "I want professors from all parts of the country...I purposely excluded both religion and politics from the University in the bill under which we are acting..."⁹ On November 17, 1868, John Le Conte was offered the professorship of physics by the University of California regents, first professor to be hired. The following year, the regents asked him to come early and serve as acting president to organize instruction. He would also serve a presidential term from 1875-1881. Joseph Le Conte was offered the professorship of geology, botany and natural history on December 2, 1868.¹⁰

In August 1869, Joseph Le Conte left Columbia, South Carolina, with his wife Caroline and five-year-old daughter Carrie. His two older daughters remained behind in the South, where they would live their married lives. The Le Contes first went by rail to

New York, then to Omaha, eastern terminus of the newly completed transcontinental railroad. An additional family member was part of the trip west: J. N. Le Conte rode *in utero* on one of America's first railway journeys to California.

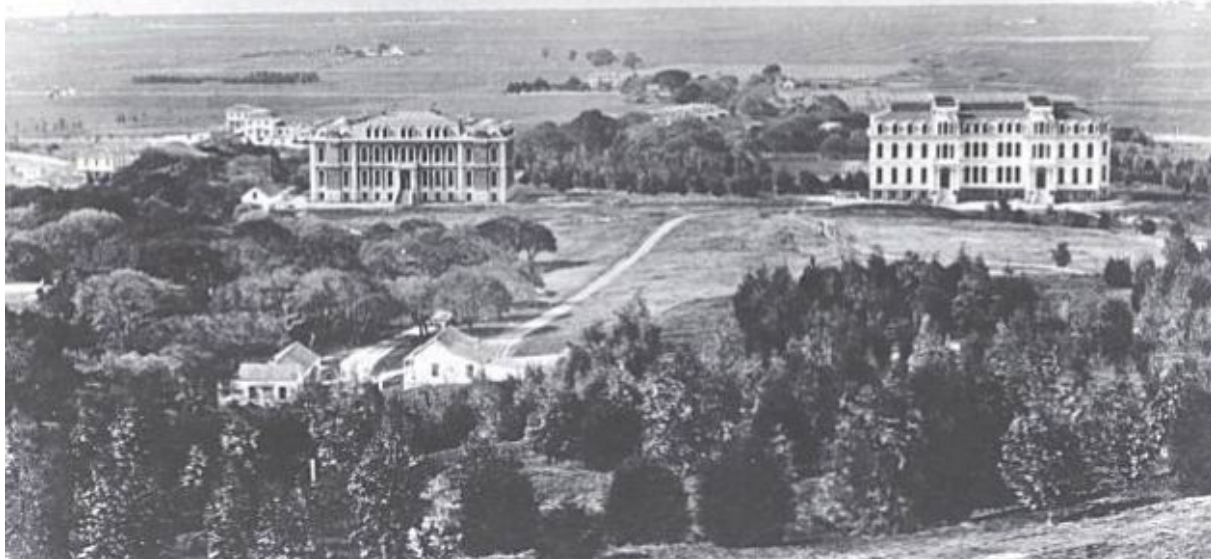
Although moving at the rate of only sixteen miles per hour and lasting a week, the railroad trip from Omaha to Sacramento must have seemed astonishingly fast, compared to even the fastest stagecoaches. Yet, as Carrie observed, "California was to mean exile" to the Le Contes. While the restless child kept watching out the windows for savage Indians and buffalo, her father observed the interesting geology of the American West. In an echo of his teacher, Louis Agassiz, he gave "some informal talks" to fellow passengers.¹¹ Scientific lectures on the fly would be a Le Conte hallmark in California.

Arriving at the Sacramento terminus, the Le Contes boarded a riverboat to San Francisco, where brother John met them and escorted them by ferry to their new home in Oakland. J. N. Le Conte was born there on February 7, 1870. His father said of him, "Born in California, he is every inch a Californian, thinking there's no place equal to his native state."¹²

In 1874, the Le Conte family took possession of one of the first cottages built by the University of California Regents for women students on the new university campus in Berkeley--not enough women to fill them had applied. J. N. grew up in "Coed Canyon" -- Faculty Glade to be, where the Faculty Club now stands--and from then on, with his circle of family and friends, both shaped and personified the Berkeley life.

GROWING UP IN A WILDERNESS IN TRANSITION

Known by his nickname Little Joe, J. N. Le Conte literally grew up with Berkeley. He described the sensation of being in a wilderness surrounding the first two university buildings—South Hall, where his father and uncle John had their faculty offices, laboratory space and the university museum, and North Hall--when instruction was moved from the College of California site in Oakland to Berkeley in 1873. He recalled that "The whole sweep from the Berkeley Hills to the Bay was one unbroken prairie [sic] with here and there at perhaps half-mile intervals scattered farm houses."¹³ He sported in Strawberry Creek, the year-round water supply of which made the campus possible. He roamed the hills with playmates who included the two daughters of agriculture professor Eugene Hilgard and the younger three children of Spanish language lecturer Charles Gompertz. Carrie became good friends with an older Gompertz daughter, Helen, who would one day become Little Joe's wife.



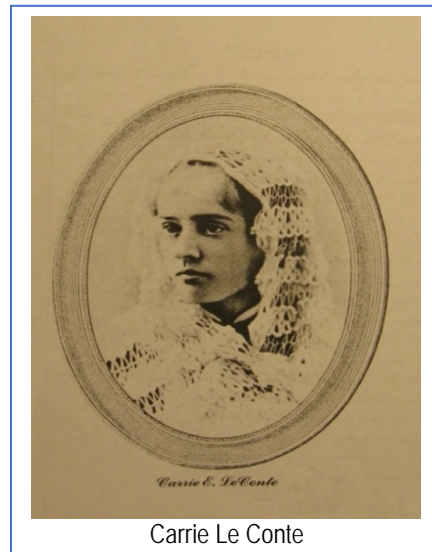
South Hall and North Hall, looking toward San Francisco Bay

John Le Conte's friend, General Barton Alexander of the Army Corps of Engineers, at work on fortifications in the San Francisco harbor, had another way of viewing the university in the wilderness. He lamented that the new campus was being opened "four miles from anyplace—without buildings, without boarding houses, without anything but bare ground. No butcher, no milkman, no grocer, no doctor, no tailor, no shoemaker, no anybody...The truth is the University ought to have been located in the city."¹⁴

For his part, Little Joe remembered his upbringing in this beautiful spot in the Berkeley Hills as “a paradise for boys—no city streets, no police, no rules or regulations, just the glorious wilderness in which to roam and play.”¹⁵

The amenities of daily life were indeed in short supply in Berkeley during the earliest years. While spared the notorious horse-car ride, an hour and a half each way, from downtown Oakland, Berkeley residents at first found no schools or physicians and only indifferent stores.¹⁶ According to Little Joe, his family received their groceries by wagon once a week.¹⁷ Many people commented that they found only one of two conditions in the unpaved roads and walkways of nascent town and campus: dust or mud.

While General Alexander and Little Joe agreed that a wilderness surrounded the new university—even if disagreeing on whether that was a misfortune or a delight—it was assuredly a wilderness with an asterisk. When the College of California trustees named and dedicated the Berkeley site in 1866, they gazed not only through the San Francisco Bay’s Golden Gate into the Pacific Ocean, they could also see the West Coast’s largest settlement, San Francisco. The city was already well on its way to presenting the urban advantages of newspapers and literary magazines, restaurants and theaters; and positioned to take advantage of such sources of civic development and material wealth as the transcontinental railroad and Nevada’s Comstock Lode. It also was a major source of students. Even after Berkeley began to offer more housing options, many continued to live at home and spend long days going to and coming from campus classes by ferry, horse car, rail, and foot.



Carrie Le Conte

Far outweighing these limitations for Little Joe was the stimulation of a campus taking shape. Watching new buildings go up at close quarters nurtured his practical instincts, evident long before he entered the university. “Old Mr. Carnal,” the university carpenter, encouraged six-year-old Little Joe to watch him work, even to participate. “My own love for tools, and for the use of tools, dates back to his kindly instruction.”¹⁸ Little Joe watched the Mechanics building go up in 1876, followed by Harmon Gym and Bacon Hall, which held the library. He “ran wild all over the University campus” and “bothered” the workmen. He was home schooled by both parents—his mother in reading, spelling and geography, his father in arithmetic.

Faculty settlers in Berkeley began establishing a community. The Le Contes moved into their newly built family home in 1881 at 2739 Bancroft Way, located where UC Berkeley’s School of Law now stands and across the street from the Hilgards’ new house. Little Joe exercised his enthusiasms by constructing a henhouse, then turning it into a chemistry laboratory, aided in equipping it by a university chemistry professor. He recalled that, “I thrilled the kids all around by spectacular chemical reactions.”¹⁹ (He is silent on his parents’ view of these “spectacular chemical reactions.”) Little Joe joined buddy Charles Palache in completing his education at Berkeley’s first public school. According to Palache, the only physics experiment at Berkeley High School during their days there was with apparatus brought by Little Joe from home.²⁰

Soon Little Joe replaced the laboratory with a machine shop in which he constructed steam engines to run his lathe, scroll-saw, stamp mill, and grindstone. According to Little Joe, “Father was so tickled with this that he got Joseph Sladky, superintendent of the University machine shop, to come up and see [one of my larger steam engines].”²¹ He learned from his father how to shoot and mount birds for the university’s developing museum. Together Little Joe and Charles Palache joined the university’s class of 1891. Little Joe’s choice of major was mechanical engineering.

UNIVERSITY OF CALIFORNIA STUDENT LIFE IN THE 1880’S

Mirroring the sparseness of the infant community, the first years of university life in Berkeley offered students nothing much beyond academic study. Lacking housing, students and faculty both spent long days commuting from Oakland; from San Francisco, days were even longer with the addition of travel from home to catch the ferry. While the university was growing by fits and starts during the period, the student body and faculty size continued to be small, educational facilities underdeveloped, and the highly regimented curriculum constrained by few course offerings.²²

Male students had the outlet of sports, and -- in the view of adults -- too often got into fights, notoriously, between the freshman and sophomore classes. As a University of California historian observes, “The rowdiness...might have had their roots in the unrestrained individualism commonly found in young societies. The fact that neither Oakland nor Berkeley offered students many places to go for amusement after class hours certainly contributed to their behavior.”²³

Nevertheless, students and faculty both answered campus scarcity, counteracting the limitations of academic life by drawing together to create clubs, musical groups and publications, part of a national pattern in and out of universities. Fraternities offered housing as well as social activities, and sports teams proliferated in both fraternities and the campus as a whole.

Though the university continued to have no more than a few hundred students into the 1890's, a distinctive campus life was emerging between 1880, the year Carrie Le Conte matriculated, and 1891 when Little Joe graduated. Attending a small, even struggling, university, contributing to its making, and sowing the seeds of its further maturity and traditions would bind students and faculty alike. By looking at campus documents and personal histories, we can glimpse student life at the young university.

Carrie and friend Helen Gompertz entered the UC Class of '84, seven years before Little Joe began his freshman year in the UC Class of '91. Women had been admitted to the university starting with the second year of instruction, yet their experiences differed from those of the young men in notable ways. Neither Carrie nor Helen left their own accounts of their undergraduate years. However, it is possible to get the flavor of the campus life that Carrie shared with Helen and other women students of the 1880's by looking at the campus *Blue and Gold* yearbooks.

The 2010 urban anthropological study, *The Lost Boys of Zeta Psi* by Laurie A. Wilkie, singled out as an exemplar of the "new masculinity" of the late 19th century Little Joe and his mountaineering exploits. Wilkie draws on earlier studies to contrast the male student's active involvement in the University of California with the exclusion of female students at this male-dominated institution. The picture thus painted is a bleak one indeed.

It is the case that there were no organized sports for women until the early 1900's²⁴ and no obligation, such as the men had under the Morrill Act provisions, to take military training. Nor were women on editorial boards of the jokey *Blue and Gold*, which were populated each year by members of the junior class.²⁵ Nevertheless, to judge from *Blue and Gold* entries, women in fact participated, if not in the melees frowned on by the adults, in numerous clubs, musical groups and publications, as well as serving as class and organization officers. In addition, though university athletics programs did indeed serve men exclusively, this did not preclude women from enjoying vigorous athletic activity outside the university.

From sophomore year on, Helen and Carrie were active in the Neolaean Literary Society and Glee Club—only recently opened to women, according to the 1883 *Blue and Gold*. One of two campus literary clubs, the Society's "order of literary exercises [was] as follows: First, Declamation; second, Music; third, Oration; fourth, Manuscript Paper; fifth, Criticism of Previous Meeting; Sixth, debate."²⁶ Helen's friend Isabel Miller belonged to the other campus literary club, the Durant Rhetorical Society. During their junior year, the Neolaean Society celebrated moving into "our beautiful Literary Hall," recently graced with the addition of a piano. This amenity became "the cause of several enjoyable entertainments," offered cooperatively with the Durant Society.

The program for Junior Day was shared by men and women, with Helen's friend Isabel offering an essay. Another woman recited a poem, while two men gave orations. The spoken parts of the program alternated with music. Dancing concluded the celebration.²⁷

Women also acted as organizational officers. Helen served as a class board member in her junior year and class treasurer in her senior year, each office held for one term. Carrie was vice president of the University Bible Students, while Helen held the positions of secretary and treasurer, and was on the committee on meetings.²⁸ Post-graduation, Helen appeared again in the 1888 *Blue and Gold* as a member of the Executive Committee for the Berkeley Choral Society.²⁹

Women might well be class officers and club participants, and might well contribute Charter Day essays, as Helen did -- her title, "The Abuse of Fine Arts" -- or be designated as commencement speaker, as Carrie was (though she resigned from the honor). The university student body had only 246 undergraduates of whom 62

were women in 1880-1. By Helen's and Carrie's senior year, undergraduate enrollment had actually fallen to 210, of whom 52 were women. The small numbers reflected California's lack of preparatory schools, a problem which the faculty had tackled by actively promoting development of California's public high schools and visiting them to assure a suitable curriculum. Other factors slowing university growth included inadequate state funding, limited suitable housing near the campus, few early curricular offerings, and indifferent administrative leadership.



Charles Palache

Countering these limitations was California's strong population and economic growth, creating what university historian Verne Stadman treats as an inevitability. He observes that, limitations notwithstanding, the university would come to grow very fast: "Before it was twenty-five years old, it ranked among the highest ten universities in the country [in terms of] enrollment, size of faculty, income, and number of graduate students."³⁰ This spurt of growth at the beginning of a long, steady increase in enrollment would be evident by the time Little Joe graduated with the Class of '91.

Carrie's and Helen's senior year *Blue and Gold* described their politics as "women's rights," perhaps tellingly in light of their active campus involvement during their undergraduate years. Eight of the ten women in the senior class were similarly listed. By contrast, some jokey entries for senior men characterized their politics variously as "free love," "according to circumstances," and "anti-f(r)at."³¹ While Carrie's future occupation was indicated with a "?" Helen's was listed as the Salvation Army, recalling an earlier *Blue and Gold* characterization of her: "Just knows, and knows no more, her Bible true."³² In fact, she would become a school teacher.³³

By the mid-1880's, five principal buildings constituted the campus: North and South Halls, Mechanics, Bacon Hall and Harmon Gym, the last three of which Little Joe as a boy had watched being built. The scientific assets of South Hall included the University's Museum of Natural History, built up from the California State Geological Survey collections into separate areas of ethnology, geology, zoology, and mineralogy. (Botany professor William Setchell formally established the university herbarium in 1895, originating in a collection amassed for the California State Geological Survey by William Brewer.) The museum was characterized as concentrating on holdings of local interest and having a dual purpose, to support student studies and to educate the public.³⁴

By the time Little Joe matriculated in the 1887-8 academic year, the city of Berkeley and campus had grown into a recognizable community. The 1887 *Blue and Gold* catalogued ways in which the original graduates of the university would be amazed at what they now might see. Berkeley featured many homes and gardens, and improvements which included sewers, gas, street-lamps, and wooden sidewalks. Residents enjoyed "a good system of schools, taught in large part by college people," as well as churches. These days, the "howl of the coyote is seldom heard."³⁵

The 1888 *Blue and Gold* nevertheless still found student hardships in abundance. For those commuting from San Francisco:

The student rushes from his home, miles out on San Francisco hills, down to the 7:30 a.m. ferry-boat. For an hour, he travels by water and rail in a shaky ferry-boat or train, where it is impossible to study. Oakland, though situated nearer, is worse in regard to physical convenience. The horse-car jogs along with twice as many passengers as it can comfortably hold. You are then transferred to a narrow-gauge steam-car. This, from time to time, jumps the track or else the engine breaks down... [Nevertheless] One remarkable thing about this route is its growing popularity since the Oakland co-eds have come to travel by it... The students living at Berkeley have a harder time still. By thunder! The eating!! The editorial hand trembles from indigestion when we think of the subject...³⁶

Such miseries notwithstanding, the enrollment picture had become more robust, with 294 undergraduates during Little Joe's freshman year growing steadily to 432 by his senior year, 1890-1, and continuing to grow thereafter. Of the UC Class of '91, *Blue and Gold* informs us that the class color was orange, the class motto "Par Praemium Labori," and the class yell "Hip! Hop! Ho! Whoa, There, Whoa! '91, '91, '91/ Ho! Ho! Ho!"³⁷

Memoirs by both Little Joe and his friend, Charles Palache -- nicknamed Charlie -- let us flesh out the *Blue and Gold* portraits of a young man's campus life in the 1880's. Because Little Joe and Charlie had many faculty in common during their four years, we can compare their views of academic life with each other's and with the cartoons, poems, squibs drawn from literary sources, and sketches of the faculty, both detested and admired, that made their way into the *Blue and Gold* yearbooks. As will be seen, Charlie could be something of a contrarian, especially when thinking back on his student years from his vantage point as a distinguished professor of mineralogy at Harvard University. Of Little Joe, Ansel Adams left us this picture: "...like all of the LeContes, [he was] small in stature and wiry. He had great physical strength and stamina...He was very outspoken, full of outgoing enthusiasms, a perfectionist in many ways, and a great person to be with in the wilds."³⁸

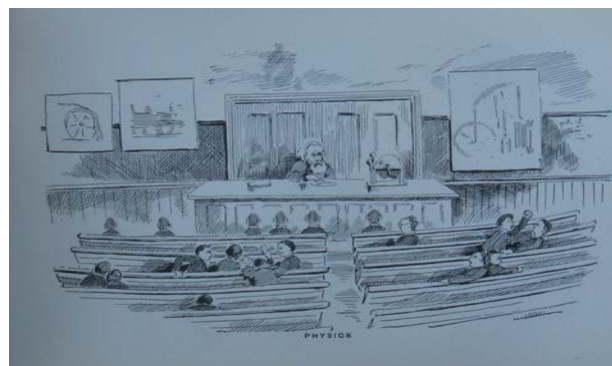
Both Little Joe, majoring in mechanical engineering, and Charlie, majoring in natural sciences, characterized their four-year curricula as "rigid," especially the freshman and sophomore requirements. With two years of mandatory English, plus three years of writing exercises and themes, Little Joe confessed to disliking the subject, which he studied with Professor Cornelius Beach Bradley. In this view, he was not alone. Bradley had introduced the infamous required freshman course, "English Prose Style," using William Minto's *Manual of English Prose Literature* as text. Minto came to be part of the Burial of Bourdon ceremony at the end of the freshman year.

What was this Bourdon (likely pronounced “burden”) that dragged the poor freshman down from his much-desired degree? M. Bourdon’s *Elements of Algebra* was the text for a course required of all freshmen. The year 1875 saw the beginning of the tradition of the Burial of Bourdon, capped with an actual burial of the hated textbook in Co-ed Canyon, the burial spot marked with a little cross. By the 1880’s, the number of crosses was steadily growing. The ceremony became elaborated with the cremation of the books as the central event, oiled by the drinking of egg nog and beer. Sophomores would try to find out when the burial was scheduled with the purpose of breaking it up—an excuse for an inter-class melee.³⁹ In 1886, Minto joined Bourdon as a casualty of the annual auto da fé.



Blue and Gold, 1890

In *Blue and Gold*, Bradley became the frequent butt of satirical cartoons, poems and squibs—perhaps an early foreshadowing of RateMyProfessor.com. Here is an example of a squib applied to Bradley: “When you die, you will not be fit to herd with the common damned. But in some deeper, blacker hole will howl out an eternity of woe.”⁴⁰ Countering this view, Charlie said of Bradley, “Anything I gained in expression I surely owe to his wise training.”⁴¹



Blue and Gold, 1890

Another shared pair of teachers was in physics. Lectures were delivered by Little Joe’s uncle, John Le Conte. Little Joe withheld comment, but not Charlie. He pronounced physics “repellent” owing to Le Conte’s “senility.” *Blue and Gold* was no kinder, depicting Le Conte’s classroom with students fighting, playing cards, sleeping, and perhaps canoodling.⁴² Student snark seemed to doom him to be remembered as a classroom bore. Still, students had an affectionate nickname for him: while brother Joseph was “Professor Joe,” he was “Professor John.”

Charlie employed his sharp tongue on the physics laboratory director Frederick Slate for his “harsh severity.” On the other hand, Little Joe would give Slate a positive review for the analytical mechanics course which was part of the mechanical engineering curriculum.

Little Joe and Charlie did agree that the faculty member who taught the German required in both science and engineering was detestable—the man Charlie called “the unspeakable Professor Putzger.”⁴³ Of Albin Putzger, Little Joe wrote, “...a poorer teacher and more peculiar personality I have never known.”

Little Joe got on well enough with his first year German teacher, Joaquim Henry Senger. But during the second year, Putzger “conditioned” him, the only time Little Joe was conditioned in his college career. To remove the condition, he retook the final examination, was conditioned again, and had to retake the entire course. A final two credits were required during his senior year, conflicting with what Little Joe called a “vital” engineering course. (Today’s engineering students might well agree with Little Joe that any engineering course was “vital” in comparison to German.) Little Joe petitioned Putzger to let him substitute four credits of astronomy for the two credits of German. According to Little Joe, Putzger “would have none of it.” For



Blue and Gold, 1877

the only time as an undergraduate, he begged his father to use his influence to allow the substitution. His father was persuasive with Putzger, the Faculty Senate gave its required approval of the petition, and Little Joe's plea for mercy succeeded.⁴⁴

The Austrian-born Putzger was a favorite *Blue and Gold* target, both his accent and teaching style the subject of mockery. A typical squib ran, "He is the very pattern of self-conceited, characterless inanity. He even seems to think it necessary to translate his ideas so as to render them level to the understanding of others, for he generally repeats his observations three or four times, varying the phrase in all ways."⁴⁵ So often was he the butt of such comments that a cartoon in the 1889 *Blue and Gold* showed an issue of the yearbook enshrined in a display case—specifically because it was free of any reference to Putzger.

Charlie and Little Joe partially agreed on another faculty member. Both studied with Little Joe's father, Joseph Le Conte. "Professor Joe" was by all accounts the most beloved faculty member of the university's earliest years.⁴⁶ Virtually all undergraduates from the 1869 opening into the 1890's took one or more courses from Le Conte. Little Joe mentioned taking Le Conte's comparative zoology course while Charlie cited evolution and geology. A typical *Blue and Gold* squib stated, "His head was silvered o'er with age, And long experience made him sage."⁴⁷



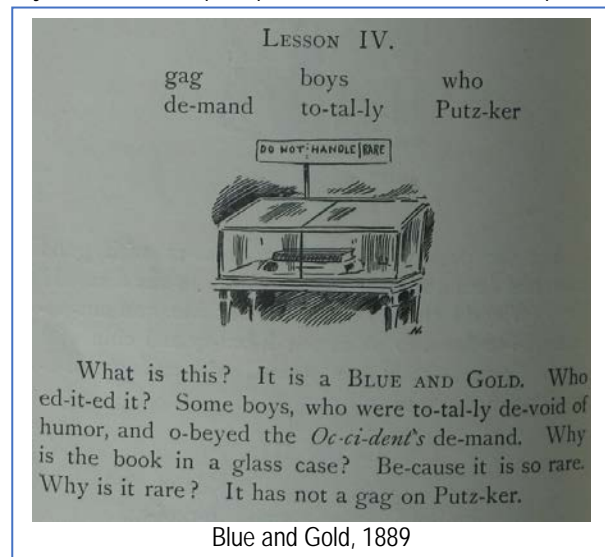
Joseph Le Conte and South Hall Classroom



J. N. Le Conte, second from left, in Mechanics shop

Le Conte emphasized throughout his life "that investigation ought not to be separated from teaching, as many suppose; that not only is one a better teacher for being an investigator but one is a better investigator for being a teacher. We never know any subject perfectly until we teach it."⁴⁸ This philosophy would continue to be embraced at the University of California. Josiah Royce went so far as to describe Le Conte the lecturer as an artist: "...the world of concrete facts will never seem to my unaided thought, as perfect and as clearly visible a union of the One and Many, of harmonious principles, and of multitudinous empirical illustrations, as it seemed to me when I listened to his lectures." Le Conte desired "to give our minds true freedom."⁴⁹ As with Louis Agassiz, Le Conte was also a frequent and dynamic speaker in public venues, such as the Mechanics Institute in San Francisco, following the Agassiz footsteps in striving to create a citizenry informed about and supportive of science. Following in Agassiz's footsteps too, Joseph Le Conte supervised the campus museum and deployed its contents in classroom demonstrations.⁵⁰

Yet, though Charlie called Le Conte's lectures "delightful," he also found fault with him for not being a field scientist "in any sense of the word."⁵¹ This statement may startle those who know Le Conte from his famous account of an 1870 camping trip in Yosemite Valley and the High Sierra in the company of eight university students and a colleague; or from his research publications on Sierra glaciation. We will return to examine what Charlie meant by this comment when we consider the ways in which the more distant wilderness of the Sierra Nevada became part of the culture of students, faculty and alumni of the University of California.



Blue and Gold, 1889

When Little Joe reached his junior year, he at last enrolled in the longed-for courses of an advanced student in mechanical engineering. In his *Notes on the Early History of the Mechanics Dept.*, he depicted the straitened circumstances of his chosen major in its earliest days. Frederick Hesse was appointed Professor of Industrial Mechanics in 1875 to start the program. At first, he was the only teacher of engineering courses in a single room in North Hall, giving lectures only, for there were no laboratories or shops.⁵²

By the 1880's, progress had been made in overcoming these deficits. The original Mechanics building that Little Joe watched go up in 1876 housed mechanical engineering and mining at first and later mining and civil engineering. In 1886, while still a student at Berkeley High School, Little Joe joined his father to visit the five-room shops facility, which included a foundry and a power plant with what was believed to be the first internal combustion engine on the West Coast. Little Joe was "thrilled" by what he saw. But he had to wait until his junior year to be inducted into shop practice with seven fellow students. He pronounced himself "delighted" with that sort of work. He said, "I put in more than the allowed time, somewhat to the detriment of my other studies."⁵³ In this, he was a template for generations of engineering students to come.



Zeta Psi House

Besides Hesse, who taught hydraulics, faculty included physics professor Frederick Slate teaching analytical mechanics; Herman Kower, mechanical drawing; and Emmet Rixford, the kinematics of machines. Little Joe found his junior year courses interesting but his senior year was his "most delightful and instructive." He took hydraulics and thermodynamics with Hesse and continued working in the machine shop with Superintendent Sladky—as Little Joe said, "purely voluntary on my part." He also loved working in the student observatory of his hard won astronomy course and described himself on clear Berkeley nights staying up to take measurements until nearly dawn.⁵⁴

Little Joe had some fun of the more familiar kind, too, as did Charlie. The *Blue and Gold* issues from 1888-1891 show us two fraternity men, Little Joe joining Zeta Psi and Charlie joining Beta Theta Pi. The Iota chapter of Zeta Psi was the oldest, initiated in 1870, prior to the university's move from Oakland to the new campus. Charlie played football for his fraternity and was on the Class of '91 baseball team; at commencement exercises for the Class of '91, he provided an essay: "The Migration of the California Sequoias."⁵⁵ *Blue and Gold* does not list Little Joe on any teams—an oversight or was his small stature a deterrent? But Little Joe was indeed a remarkable athlete and now we'll begin to open the door on the wilderness life and society that drew Little Joe, his Zeta brothers, his family, his growing circle of friends, and fellow Berkeley and other San Francisco Bay Area citizens to the Sierra. The shared enthusiasm for summers in Yosemite Valley and the Sierra high country, among men and women alike, put a stamp on these Californians that would lead to the common cause of creating a new club to protect the Sierra wilderness.



Six-inch equatorial, Students' Observatory

A SOCIAL LIFE IN THE MOUNTAINS

Little Joe became the epitome of the dedicated Sierran, spending most summers in High Sierra camping, hiking and exploration, even in research and education. His pattern of lifelong devotion to the Sierra commenced in 1874, when his father took him to Lake Tahoe and on horseback to the top of his first mountain, Mount Tallac. His Sierra exploits were a culmination of his love of the wilderness, bred during his Berkeley campus upbringing and capped when he and Charlie celebrated their high school graduation with a camping trip to wild Mt. Diablo nearby.

Little Joe's father helped set what would become the Berkeley pattern with a saddle trip to the mountains at the end of the university's first year of instruction. Joseph Le Conte's account of that trip in *A Journal of Ramblings through the High Sierras of California* offered a foreshadowing of the enjoyment of the mountain wilderness that so many university generations to come



Professor Le Conte in Camp in the King's River Cañon

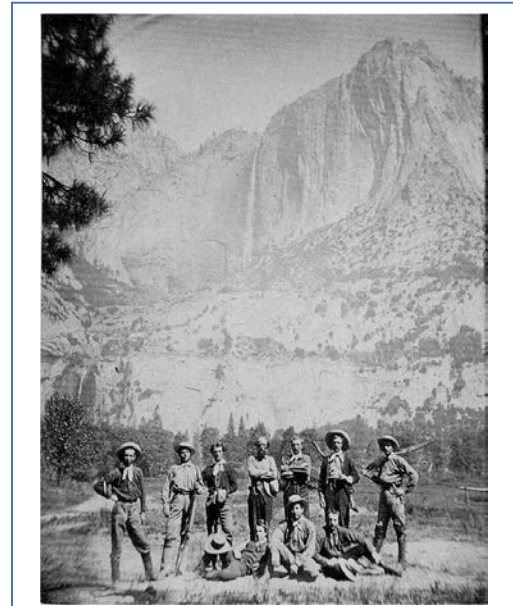
would share.⁵⁶ In 1870, eight students in the first University of California class invited Le Conte plus mathematics instructor Frank Soulé to join them on a camping trip route that took them to both Yosemite Valley and the Tuolumne Meadows high country. With no more personal gear than they could carry on the backs of their saddles, the "University Excursion Party," as they styled themselves, spent their days in Yosemite Valley visiting the already-famous sights. They met John Muir, who joined them as far as Tuolumne Meadows. Circling around east of the Sierra, they returned by way of Sacramento, their ragged appearance leading passersby to ask whether they had just come across the prairie from back East. This would be the first of Le Conte's eleven summer trips to the Sierra.

In the beginning, getting to the Sierra was not half the fun.

Little Joe's autobiography and trip diaries start in the period during which travel to Yosemite Valley was an arduous five or six day affair, by steamboat, wagon, horse, and foot, followed by the triumph of the automobile during the early part of the twentieth century, which made access to Yosemite Valley and Sierra high country a matter of a single day.⁵⁷ Little Joe's earliest Yosemite experience and the most sustained one throughout his life was with his family and the Berkeley circle of faculty, students and alumni who made Yosemite and the Sierra wilderness their summer destination. During school year weekends, the nearby wilderness of Mt. Tamalpais and Mt. Diablo were popular destinations. With the summer, Berkeley residents set up long term Sierra camps, especially in Yosemite Valley and Tuolumne Meadows. They visited one another for afternoon teas, dinners, excursions, and campfire socializing. The music that was so important to University of California and Berkeley life was part of evenings around the campfire as were stories, jokes and memorized literature and poetry. In short, the social life of Berkeley moved to the mountains.

Studies of 19th century camping in the Sierra have stressed the expense involved, excluding all but the wealthy. But for those who were students, teachers or other residents of Berkeley or San Francisco, Sierra camping was well within reach and a popular pastime.⁵⁸ When the University of California's first dean of women, Lucy Sprague Mitchell, reflected on the Berkeley she knew in 1906, she remembered that "The magic of outdoors California reached its climax in the summers when there was a veritable exodus of [University of California] folk to the Sierra. The summer camping began the first of July, after Sierra snow had melted enough to make the trails passable, and was over for university folk by the middle of August, for the University opened then...It was all so easy, this outdoor life in California!"⁵⁹

Little Joe's first trip to Yosemite Valley in June and July 1878 included his sister Carrie, father and mother, Carrie's friend Nona, and Lee, the family's Chinese cook. Also in the party was Le Conte's married daughter Emma Furman, who made the long trip from Georgia to California several times and joined at least three family excursions to the Sierra. It is from teenager Carrie's delightful illustrated trip diary that we learn the details of the demanding journey, followed by weeks of outdoor pleasures. Travel began by overnight boat from Oakland to Stockton, where the family transported their carriage and animals. Halfway through their six-day journey to Yosemite Valley, camping out as they went, they had to ascend the steep Priest's grade on their way to Big Oak Flat during what Carrie called the hottest part of the day. The party mostly walked while the poor animals dragged the carriage up many hundred feet.⁶⁰

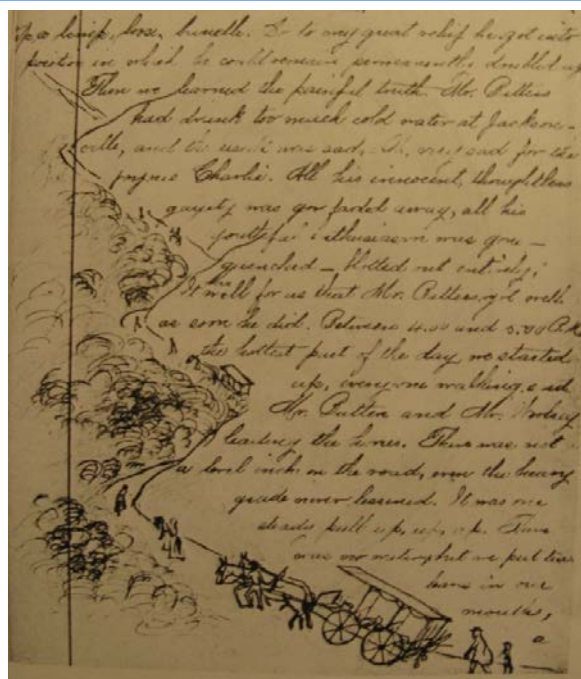


University Excursion Party, 1870—Joseph Le

Once in Yosemite Valley, Carrie recorded a season of absolute enjoyment. She and her friend spent days hiking and riding to the valley's famous waterfalls and vistas, evenings singing and telling stories around the campfire, and whenever possible, flirting with the University of California senior Charlie Butters, who was driving their carriage. She described a visit from University of California Professor Bernard Moses, camping in the Valley with four students.

Even though a remote destination, Yosemite Valley had already become a wilderness with an asterisk. When Carrie wrote of going to "town," she referred to a collection of rough hotels, enterprises that grew food for visitors and feed for animals, and providers of other basic needs, such as blacksmithing. In Carrie's view, camping was the superior choice. She contrasted her days with those of the people staying at a hotel:

When we drove into town every evening, we saw the 'hotel people' strung along the porch like so many wall-flowers. We pitied their doom of having to sit in stiff-backed chairs instead of flinging themselves full length on the ground strewn with fragrant pine-needles. 'Poor things! I said, 'they don't have any nice times at all; they don't climb after Tent Rocks and slide down boulders, they don't ride on little white mules, they don't have camp-fires!'⁶¹



Carrie Le Conte. *Yo Semite 1878 Adventures of N & C*

Yet she did have the grace to add, "I wonder if the 'poor hotel people' didn't pity us too."

Carrie offered this benediction at the end of the trip: "Of that sweet free camp life of ours we always look back with delight. And I think that each and every one of us should be grateful for the pleasure it has given, for the good it has done us."⁶² Her satisfaction in her wilderness summer would be echoed in her own generation and by those to come.

SIERRA WILDERNESS: AN OUTDOOR UNIVERSITY FOR THE EXPLORER-SCIENTIST AND TEACHER

As three Le Contes, father, son and brother, would discover, California wilderness offered another delight: the chance to live the explorer-scientist's life. All three embraced its varied opportunities. In so doing, they followed John Muir's footsteps. While the State Geological Survey had begun exploring and mapping the Sierra wilderness, large expanses remained unknown, its animal, vegetable and mineral resources yet to be identified and scientifically described. John Muir had declared, "How intensely I desire to be a Humboldt!"⁶³ On his way to South America to fulfill his explorer-scientist dream of following Alexander von Humboldt with his own adventures and discoveries, illness intervened and it was in the Sierra that he would gain fame through careful field observation and publication, particularly on the glacial origin of Yosemite Valley and the living glaciers of the High Sierra.

Many other scientists, professional and amateur, would follow Muir with their own Sierra discoveries. Environmental historian Michael L. Smith makes the case that with severely limited scientific equipment and institutional support, California scientists turned to the "vast natural laboratory all around them," in the study of which they stressed the unique qualities of California terrain and emphasized first hand observation.⁶⁴

Joseph Le Conte became part of this scene, beginning with his 1870 trek. As he said, "These early years in California were very active ones for me, the wonderful new country, so different from any that I had previously seen, the climate, the splendid scenery, the active, energetic people, and the magnificent field for scientific, and especially for geological investigations, stimulating my intellectual activity to the highest degree."⁶⁵ Le Conte's *Ramblings* described how the pleasure of exploring wild, often unknown, mountain wilderness could be united with education and research on horseback and in camp. The camping adventure gave him scope to offer lessons on geology, much as he had lectured to passengers on his transcontinental train trip. In *Ramblings*, he summarized his campfire lectures on the science underlying natural phenomena observed during the day. An excerpt gives a sense of his highly sensory approach during the party's Tuolumne Meadows encampment near Soda Springs:

You saw yesterday and this morning the bubbles of gas which rise in such abundance to the surface of Soda Spring. You observed the pleasant pungent taste of the water, and you have doubtless associated both of these with the presence of

carbonic acid. But there is another fact which probably you have not associated with the presence of this gas, viz., the *deposit of a reddish substance*. This reddish substance, which forms the mound from the top of which the spring bubbles, is carbonate of lime, colored with iron oxide. This deposit is very common in carbonated springs. I wish to explain it to you.⁶⁶

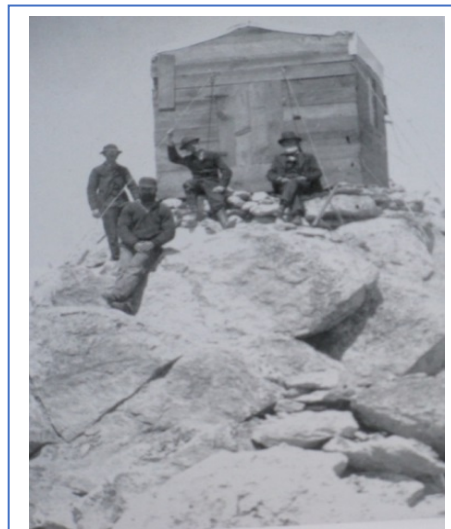
In parallel with John Muir, with whom he began a life-long friendship on this excursion, he published articles on his study of Sierra glaciation.⁶⁷ The friendship came naturally to two people accustomed to experiencing geology and the life sciences as a continuum for study and education. Humboldt's *Cosmos*, a copy of which Muir owned, resonated with Muir's own observations of a universe in which everything was hitched to everything else. As a Yosemite Valley guide, Muir knitted in his scientific observations as he led visitors to scenic viewpoints. He relished the times when he could "interpret the rocks" and "preach glaciers" to his eager listeners.⁶⁸

Le Conte was Muir's counterpart in academia. His biographer argues, "Had he been less the universalist in a rapidly changing time of specialization, the old southerner might have achieved the top rank."⁶⁹ Josiah Royce's memorial offered an elaboration, describing Le Conte's "lifelong interest in joining minute and detailed special studies with an interest in the unity of all human undertakings."⁷⁰ Le Conte, the teacher, on campus and in the wild Sierra, carried forward the Humboldtian legacy of seeing links in the cosmos. These lessons would echo long after he was gone.

John Le Conte also found in the Sierra material to pique a physicist's interest. His "Physical Studies of Lake Tahoe" was published in the general-audience *Overland Monthly* in 1883 and 1884. Among other observations was an analysis of what caused the deep blue color of the lake.⁷¹

In the summer of 1889, following their sophomore year, Little Joe and Charlie joined two other classmates on another Sierra camping trip with Joseph Le Conte—the father perhaps looking to repeat with his son and his son's friends the pleasure of the 1870 trip. Both Charlie's and Little Joe's trip diaries expressed their great enjoyment in the outing. Little Joe used his first Kodak camera to illustrate his diary, though the pictures were barely larger than passport photos. The trip was punctuated by encounters with other university saddle-trippers. On a climb of Cloud's Rest, the party found names of University of California students who had climbed the promontory earlier, together with that of Little Joe's first year German teacher, "Dr. Senger." The party spent time with two university people camping near them in Yosemite Valley. One of them, English instructor William Dallam Armes, had been a fellow undergraduate with Senger in the class of '82, and like Senger, was made a faculty member after graduation.⁷² Armes distinguished himself at one evening campfire by playing the harmonica.

As in 1870, Joseph Le Conte took the role of teacher in the wilderness as well as companion. Both Little Joe and Charlie mentioned Le Conte's horseback lecture on Sierra trees and their distribution across elevation zones, delivered as the party crossed Tamarack Flat on their way to Yosemite Valley. Little Joe's diary described campfire lectures on the origin of Hetch Hetchy Valley, delivered in the valley itself, and, later in the trip, on "Carbonated Springs, Quaternary Volcanoes, and Alkaline Lakes."⁷³ For Little Joe, the trip was in essence a launch of his own explorer-scientist career.



George Davidson, right, at his observatory on Mt. Conness

In 1890, between his junior and senior years, Little Joe joined a group of fraternity brothers in what he called "the most glorious trip of my whole life." University of California Honorary Professor George Davidson, head of the U. S. Coast and Geodetic Survey's West Coast division, was returning to the High Sierra to improve mapping and altitude readings of the southern range. Davidson lent a mountain transit plus barometers to Little Joe and his companions and showed him how to take measurements.⁷⁴ A Zete brother lugged the transit, as the group climbed peaks from the southern end of the Sierra to Mt. Conness in Yosemite on the top of which the 65-year old Davidson had built his summer observatory.⁷⁵ Little Joe brought his Kodak too and photographed Davidson and the observatory at 12,649 feet. This was the first of many mountain trips in which Little Joe would aid scientists from various fields, or as at Mt. Rainier in 1905, conduct a group of his own in taking measurements of glaciers.

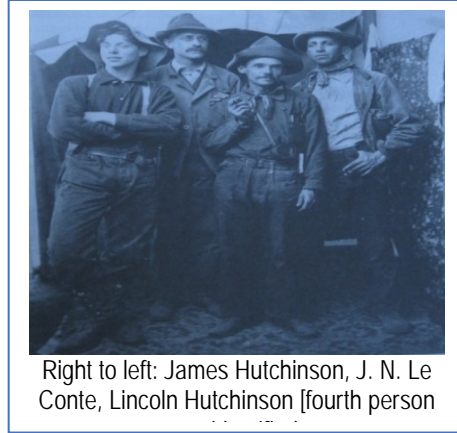
With the 1890 trip, Little Joe began a decade of High Sierra exploration. Frequent mountain companions included the University of California alumni brothers Lincoln Hutchinson, who became a University of California economics professor; and James

Hutchinson, who became a lawyer. During the 1890's, Little Joe and James scouted parts of the future John Muir Trail. Little Joe also made and published the best maps to that date of the High Sierra, superseded only in the early 20th century by the U. S. Geological Survey maps.

WOMEN IN THE WILDERNESS

As Carrie's account of her family's 1878 trip showed, women were fully engaged in outdoor social life and adventuring. By the 1890's, women had joined men as high country trekkers and mountain climbers. It should be no surprise that women as well as men would become charter members of the Sierra Club.

In 1892, Little Joe would do the late 19th century version of hooking up. In Yosemite Valley with a companion, he joined a party largely made up of women, including the wife of painter William Keith, Mrs. A. C. Miller and her daughters Isabel and Estelle, and Isabel's college friend, Helen Gompertz. By this date, the trip to Yosemite could be made by boat, train and stage, but foot travel supported by stock was the common form of access to the High Sierra. Helen and Isabel wanted to climb Mt. Lyell, at 13,120 ft., the highest peak in Yosemite National Park.⁷⁶ Little Joe and another University of California graduate joined them in the one week trek, the burro jingles carrying 120 pounds of camp necessities. Little Joe commented, "The girls walked well."⁷⁷ Helen would write an article about the adventure for the May 1894 issue of the *Sierra Club Bulletin*, observing that she and Isabel were the first women to reach the top of Mt. Lyell.⁷⁸



Right to left: James Hutchinson, J. N. Le Conte, Lincoln Hutchinson [fourth person]

Starting in 1896, Helen joined Little Joe regularly for summer camping in the Sierra, often as part of the Le Conte family camps. In 1896, Helen and the Miller sisters made a first ascent of University Peak (13,589 ft.) with Little Joe, who had named the mountain in honor of the University of California. Again, Helen memorialized this excursion in a *Sierra Club Bulletin* article. The party had been taken by packers into Kings Canyon, which became the base from which they made multi-day treks—a pattern which the Sierra Club adopted. The culmination was a climb of Mt. Brewer, where Estelle Miller discovered the signature left there by William Brewer during his first ascent with Clarence King in 1864. Helen mused, "Suppose we had been the first to come up this way, how hopeless the tangle of mountains, ridges, and cañons would have appeared?"⁷⁹

In 1897, Little Joe and Helen climbed Lyell again and also Mt. Ritter (13,149 ft.). They made more ascents together in 1899 and 1900, as well as burro-supported knapsack trips as a twosome. In 1901, they were married. The Sierra had become for Little Joe not only a realm of exploration and adventure with his pals of both genders but also very much a family experience, one which would be a fixture of his future with the Sierra Club and on regular family encampments with his own wife and children.

WILDERNESS SCIENCE AT A TIME OF TRANSITION

Charles Palache's critique of Joseph Le Conte for being no field scientist in any sense of the word came much later in Palache's life when his Harvard University career was well-established. As Palache looked back on the 1889 trip, he said that he learned little about geology because "I didn't know how to use my eyes." This in spite of Le Conte's horseback and campfire lectures explaining the science behind what they were seeing during the excursion.

Back on campus, the early University of California science faculty would in fact often repair with their students into the countryside on periodic field trips near campus and farther afield to observe natural phenomena, hamstrung as they were by limited scientific laboratories and equipment on campus. Palache himself recalled a field trip into the Berkeley Hills with mining professor Samuel B. Christy—"a good lecturer in presenting the material but with an unfortunate manner."⁸⁰ Little Joe cited an 1889 New Year's Day excursion to Cloverdale, over 80 miles to the northwest of Berkeley. In the company of his father and some fraternity brothers and friends, Little Joe viewed a two-minute eclipse of the sun, which he declared "marvelous"—a chance of a lifetime.⁸¹ When the new Lick Observatory was completed during Little Joe's senior year, he made several trips, once with his father: "It was a glorious experience."⁸²

Yet Palache's criticism suggested the senior Le Conte's lack of rigorous field methodology. Le Conte's biographer spells out Le Conte's limitations in the field.

These recreation-research trips added much to Le Conte's knowledge of geology, but they were rarely long enough to qualify him as a genuine field student. His work in the field never compared in intensity with that of many of his peers in geology, and he always remained much more of a theoretical than a field geologist.⁸³

As with Agassiz at Harvard, Le Conte had been hired by the university to cover a range of disciplines. He was fighting a rearguard action as one of the last nationally eminent generalists in a time when specialization increasingly dominated the sciences. He expressed his views this way in his *Autobiography*: "One of the great evils of modern life and modern education is overspecialization, and consequently the loss of sympathy between men of different pursuits. Society is thus broken up into intellectual cliques, and is in danger of falling apart for want of cohesive sympathy between its constituent parts."⁸⁴

John Muir, too, found modern science reductive. Breaking knowledge into small pieces through specialization obscured the whole picture: "All correct knowledge of the natural world [Muir insisted] began with an impassioned sensual joy in the environment."⁸⁵ In Michael L. Smith's analysis, California's earliest scientists were hampered by isolation from colleagues east of the Mississippi and in Europe; their lack of laboratories favored field-based geology and the life sciences over physics and chemistry. Field work was very much in the descriptive vein of the old state surveys. Further, because California scientists did not begin to catch up with the professionalized sciences until after 1890, they maintained a visible public role for longer than did their Eastern counterparts.⁸⁶

In Palache's view, the university's lack of rigorous field training was remedied with the 1890 arrival of Andrew C. Lawson. Joseph Le Conte had invited Lawson to join the faculty as an assistant professor of mineralogy and geology in order to "develop the scientific side of the subject so that [Le Conte] could devote himself to the philosophical side."⁸⁷ Charlie described the first meeting that he and other mineralogy students had with Lawson on the top floor of South Hall. Pointing to the Berkeley Hills, Lawson asked, "What's up there?" The students did not know. "Well, we will have to go and see and have some maps made." Charlie continued, "And so we did under his inspiring leadership." With a doctorate from Johns Hopkins University, Lawson brought with him "the ideals of research and new tools for it in microscopic study of rocks." Charlie published his mineralogical research in the Lawson-initiated *Department of Geology Bulletin*. Both Lawson and Joseph Le Conte urged Charlie to go to Germany for advanced study, thus launching the distinguished career that he would pursue on the faculty at Harvard University.⁸⁸

CONCLUSION

The accelerating enrollment growth and transition of university sciences evident in the 1890's received a strong boost with the presidency of Benjamin Ide Wheeler starting in 1899. Yet even as the University of California with great success entered the higher education mainstream of specialization in the sciences, a continuing and ever-diverging stream of faculty and their students continued to emphasize field observation that, in common with the earlier state natural resource surveys, foregrounded scientific discovery and naming of natural objects. In the spirit of Humboldt, this new generation of field scientists, which included Willis Linn Jepson in botany, John C. Merriam in paleontology, and Joseph Grinnell in zoology, described origins of phenomena with an emphasis on an interconnected fabric. The California wilderness continued as a magnet for these faculty and their students, carrying forward the holistic values embraced by Joseph Le Conte and John Muir.



Helen Gompertz on top of Mt. Ritter

The California wilderness continued as a magnet for these faculty and their students, carrying forward the holistic values embraced by Joseph Le Conte and John Muir.

Given the experience of University of California faculty, students and alumni in starting clubs in the early campus years, John Muir turned to his UC friends when he was challenged to found a "Yosemite defense association" to protect the newly established Yosemite National Park of 1891. Products of a campus begun in the wilderness and a culture of summer adventure in the wild Sierra, UC faculty, students and alumni answered the call. German professor Joaquim Henry Senger and English professor William Dallam Armes sent out invitations to form a new alpine club with an activist agenda. Founded in 1892, the Sierra Club counted among its charter and earliest members Joseph Le Conte, J.N. Le Conte, Helen Gompertz, Charles Palache, the entire mechanical engineering faculty, Cornelius Beach Bradley, Andrew C. Lawson, James and Lincoln Hutchinson, and Willis Linn Jepson (still a UC student at the time). The club would follow in the footsteps of Joseph Le Conte and John Muir in promoting campfire education and hosting scientists who were piggy-backing scientific field work on recreational outings. The Berkeley culture which embraced the challenge of building a campus in the wilderness and carrying

the resulting social life and fellowship into a beloved mountain wilderness contributed to an ethic of environmental protection that continues to this day.

ENDNOTES

- ¹ The original name in 1867 when the school located in Berkeley was the California State Asylum for the Deaf, Dumb and Blind.
- ² A benefactor of Yale University with a strong interest in education in America, Berkeley foresaw in America a reinvigorated future. His poem, "America or The Muse's Refuge—A Prophecy," moved a College of California trustee to recommend naming the proposed university site Berkeley. See Verne A. Stadtman. *The University of California 1868-1968*. (New York, NY: McGraw-Hill, 1970), 14, for details of the dedication.
- ³ William Warren Ferrier, *Origin and Development of the University of California*. (Berkeley, CA: The Sather Gate Bookshop, 1930).
- ⁴ A *Blue and Gold* history of the university dates three faculty appointments as being made on December 1: Joseph Le Conte; George Davidson, head of the U. S. Coast and Geodetic Survey's West Coast division, as non-resident Professor of Astronomy and Geodesy; and R. A. Fisher, Dean and Professor of Mining and Metallurgy. *Blue and Gold*, 1887, 154. Early issues of *Blue and Gold* can be accessed on line at <http://catalog.hathitrust.org/Record/009988508>
- ⁵ Daughter Carrie Le Conte added her own details to the picture of the former Le Conte slaves sustaining the family after the war. "Our faithful negroes cultivated the back lot, and we were accustomed to seeing our dinner dug out of the earth, culled from branch, vine, or hen's nest, or in the form of a headless chicken flouncing over the yard." Quoted in Carrie E. Le Conte, *Yo Semite 1878 Adventures of N & C*. (San Francisco, The Book Club of California, 1944); Susanna B. Dakin, Introduction, x.
- ⁶ Joseph Le Conte, *Autobiography*, 229ff.
- ⁷ Carrie Le Conte, *Yo Semite*, xi.
- ⁸ Stephens, 96, 105-6. Enacted by Congress during the Civil War, the National Academy of Sciences specifically excluded anti-Union sympathizers, barring membership to the Le Contes for many years in spite of their strong reputations in the sciences.
- ⁹ Carrie Le Conte, *Yo Semite*, xi-xii.
- ¹⁰ Joseph Le Conte's biographer, Lester Stephens, notes that the loss of its two eminent scientists was a serious blow to the University of South Carolina. See Stephens, 109.
- ¹¹ Carrie Le Conte, *Yo Semite*, xiv. Biographer Lane Cooper wrote of Louis Agassiz, "...he would talk of glacial phenomena to the driver of a country stagecoach among the mountains, or to some workman, splitting rock at the road-side, with as much earnestness as if he had been discussing problems with a brother geologist." See Lane Cooper. *Louis Agassiz as a Teacher: Illustrative Extracts on His Method of Instruction*. (Ithaca, NY: The Comstock Publishing Co., 1917), 7. Joseph Le Conte very much followed in Agassiz's footsteps in this regard.
- ¹² Joseph Le Conte, *Autobiography*, 300.
- ¹³ J. N. Le Conte, *Recollections* [typescript]. (Berkeley: Joseph N. Le Conte Papers, Bancroft Library, University of California), 5. Note on names: in the recounting of J. N. Le Conte's childhood and college years, his nickname "Little Joe" will be used; and J. N., for his adult years, though the nickname Little Joe continued to be used. For his father, Joseph Le Conte is used.
- ¹⁴ Joseph Le Conte, *Ware Sherman* (Berkeley: University of California Press, 1938): Carrie Le Conte, Introduction, xxiv.
- ¹⁵ J. N. Le Conte, *Recollections*, 6.
- ¹⁶ Stadtman, 59.
- ¹⁷ J. N. Le Conte, *Recollections*, 8.
- ¹⁸ *Ibid.*, 7.
- ¹⁹ *Ibid.*, 22.
- ²⁰ Charles Palache, *Autobiographical Notes* [unpaginated]. "Fairview" chapter. <http://franklin-sterlinghill.com/cp/auto.shtml> See also Berkeley: Bancroft Library typescript C-D 5193.
- ²¹ Le Conte, *Recollections*, 22-4.
- ²² The head of the California State Geological Survey, Josiah Whitney had anticipated that young Californians were too raw and undereducated to require a university in the near future. As chair of the California legislature's commission to report on "the feasibility of establishing a State University, embracing an Agricultural College, a 'School of Mines,' and a Museum—including the Geological collection of this State...", Whitney argued that classical education should be left to the sectarian colleges and instead the first state university should be a polytechnic on the model of Rensselaer in New York. See California, Legislature, Board of Commissioners to Report upon the Feasibility of Establishing a State University. *Report relative to establishing a State University made in accordance with a concurrent resolution passed at the fourteenth session of the Legislature*. Pamphlets on the College of California, no. 12 [Sacramento, State Printers, 1864], 3. Bancroft Library, University of California. The earliest university faculty would not have disagreed with Whitney's assessment of the unpreparedness of California youth for university education: enrollment numbers remained very low for many years and such essentially preparatory courses as algebra were required of all freshmen. Rather than punting on the question of when young Californians would be ready for a university, as Whitney did, the faculty answered the need for preparatory education by promoting development of high schools in the state and sending accrediting teams to assure that sound curricula were offered. See Verne A. Stadtman. *The University of California 1868-1968*. (New York, NY: McGraw-Hill, 1970), 93-5.
- ²³ Stadtman, p. 166.
- ²⁴ Helen's younger sister Kate would be captain of the university's women's basketball team in 1903. After completing her undergraduate degree and a degree in medicine, Kate would be appointed Women's Physician at the university.

²⁵ In the early 1890's women began to appear on *Blue and Gold* editorial boards.

²⁶ *Blue and Gold* (Berkeley: University of California, 1878), 88.

²⁷ *Blue and Gold*, 1884, 32.

²⁸ According to the 1882 *Blue and Gold*, the University Bible Students was founded in 1878, described as the first and only campus religious organization. Its purposes were 1) the promotion of religion and morality among students, 2) The consideration of religion in connection with history, philosophy, and science.

²⁹ *Blue and Gold*, 1888, 106.

³⁰ Stadtman, 85.

³¹ *Blue and Gold*, 1885 (1884), 25.

³² *Blue and Gold*, 1883, 162.

³³ During Carrie's and Helen's senior year, the freshman class included two high school classmates from San Francisco, Stephen T. Mather and Adolph C. Miller, each of whom would play a role three decades later in advocating formation of the National Park Service. A third key figure in the story of the founding of the National Park Service, enrolled in the university in 1885 as a "partial or special course student," overlapped with Miller and Mather: Franklin K. Lane. He would serve as Secretary of the Interior under whose aegis the National Park Service was founded in 1916.

³⁴ *Blue and Gold*, 1887, 221.

³⁵ *Blue and Gold*, 1887, 208.

³⁶ *Blue and Gold*, 1888, 123-4.

³⁷ *Blue and Gold*, 1889, 8.

³⁸ Joseph N. Le Conte, *A Summer of Travel in the High Sierra*. (Ashland, OR: Lewis Osborne, 1972), Preface, 8.

³⁹ Yale University, as in other respects, served as a model for the University of California. "Special Days & Events: Burial of Euclid--A Sophomore Class tradition until 1861, the Burial of Euclid is the celebration of the end of their Euclid studies. A ceremonial disposal of the book often consisted of poems, tragedies, marches, and burning, burying, or burning and burying." (source: <http://guides.library.yale.edu/content.php?pid=379561&sid=3163171>) In this internet age, it is possible readily to see the books that drove the University of California "freshies" around the bend: Bourdon: <https://archive.org/stream/bourdonalgebra00davririch#page/n7/mode/2up> Minto (1901 edition; includes introduction to original 1872 edition): <https://archive.org/stream/manualofenglishp00mi#page/n7/mode/2up>

⁴⁰ *Blue and Gold*, 1888, 218.

⁴¹ Charles Palache. *Autobiographical Notes*. "College" chapter. In Bradley's defense, the 1936 University of California *In Memoriam* for Bradley notes, "He was an excellent teacher, clear-cut, precise, critical yet tolerant, stimulating to serious students." We may conclude that Palache was one of those "serious students." California Digital Library, <http://texts.cdlib.org/view?docId=hb9q2nb5z2&doc.view=frames&chunk.id=div00004&toc.depth=1&toc.id>

⁴² Among John Le Conte's many professional memberships, he had at last, together with his brother, been admitted to the National Academy of Sciences, which had initially turned down Confederacy sympathizers. John was also a member of the American Association for the Advancement of Science of which Joseph would serve a term as president.

⁴³ *Ibid.*, "College" chapter.

⁴⁴ J. N. Le Conte. *Recollections*, 27, 32-3.

⁴⁵ *Blue and Gold*, 1888, 219.

⁴⁶ The admiration expressed by Harvard philosopher Josiah Royce, the first academic superstar educated at the University of California, reflected the unalloyed reverence for "Professor Joe" felt by the students who studied at the university during its first three decades of existence. Royce recalled anticipating the years in which he would be able to take Le Conte's classes, so much so that he joined other students sitting outside the lecture hall just to hear Le Conte. He took six Le Conte classes and said of the first lecture he heard, "The union of empirical data with speculative ingenuity which the whole discussion involved appealed to my deepest instincts, as music, when first heard, awakens a sensitive young appreciation. The artistic mode of exposition charmed as an exciting story charms." Josiah Royce, "Joseph Le Conte," *The International Quarterly*. Vol. IV (July-December, 1901), 328. Royce's detailed appreciation of Le Conte's magnetism as a teacher was echoed by scores of others, including John Muir. John Muir, "Reminiscences of Joseph Le Conte," *California Magazine* (September, 1901). While acknowledging the uncomplicated esteem felt by Joseph Le Conte's students, colleagues and friends, the contemporary American troubled by the continuing inability of the United States to free itself from shadow of racism, especially as it was propagated in the slave-holding South, finds Le Conte a difficult case. For his whole life, he dismissed the African-American's capacity for independent achievement. This stance originated on the slave-dependent rice plantation of his upbringing. With experience, he did have the capability to reform stereotypical ideas. He shared with other Southerners a protective and patrician view of women and their capabilities. When the University of California regents, following the lead of the University of Michigan, began admitting women in the second year of instruction, Le Conte was opposed. It took him only a year to change his mind and say, "Surely before long female talent will be so far recognized that the Professors chairs may be occupied by them." Yet lacking a parallel post-Civil War experience with African-Americans, he remained imprisoned in the attitudes of his upbringing. The upshot was that he promulgated a view of all races that asserted white superiority. Unfortunately, the society he encountered in nineteenth century California was not one which would challenge his views.

⁴⁷ *Blue and Gold*, 1882, 174. The 1881 *Blue and Gold* included a more light-hearted squib in a Gilbert and Sullivan vein: "I can tell a modern pollywog from a saurian or troglodyte: /I'm posted on the theory and practice of biology--/But I'm just a trifle weak upon the nice points of theology./In fact, in matters vegetable, animal, or mineral, /I am the very model of a scientist in general." (p. 137)

⁴⁸ *Autobiography*, 257.

⁴⁹ Royce, 329.

⁵⁰ The on-line history of the University of California Museum of Paleontology includes images of both Le Conte's classroom and the display cases in the Museum of Natural History in South Hall. <http://www.ucmp.berkeley.edu/about/history/index.php> While Joseph Le Conte was the

museum's first supervisor, the first formal curator was John James River appointed in 1878. In August 1895, the positions of curator and assistant curator were abolished and the museum was again placed under Le Conte. (Ira Jacknis, "A Museum Prehistory: Phoebe Hearst and the Founding of the Museum of Anthropology, 1891-1901." *Chronicle of the University of California*. Number 4 (Fall 2000), 54.)

⁵¹ Josiah Royce would have agreed, insofar as what he saw as the limitation of the university's early years meant that neither field study nor laboratory work were part of Le Conte's courses. (Royce, p. 329.)

⁵² J. N. Le Conte. *Notes on the Early History of the Mechanics Dept.* [typescript] (Berkeley: Joseph N. Le Conte Papers, Bancroft Library, University of California).

⁵³ J. N. Le Conte, *Recollections*, 29.

⁵⁴ See Carey, 196. Frank Soulé, Joseph Le Conte's colleague and companion in the University Excursion Party saddle trip to Yosemite Valley and beyond, described later in this chapter, was responsible for acquiring the student telescope for the campus and installing the student observatory in which Little Joe spent so many happy nights. The astronomy division was part of the civil engineering program which Soulé helped found.

⁵⁵ *Blue and Gold*, 1892, 130.

⁵⁶ Joseph Le Conte, *A Journal of Ramblings Through the High Sierras of California*. <http://www.yosemite.ca.us/library/leconte/>

⁵⁷ Though a railroad from Merced to the town of El Portal near the entrance to Yosemite Valley was opened in 1907, auto camping had the advantage of allowing enthusiasts to bring more gear with them. By 1922, 65% of Yosemite visitors were arriving by automobile vs. 24% by railroad. See Stanford E. Demars. *The Tourist in Yosemite 1855-1965*. (Salt Lake City, Utah: University of Utah Press, 1991), 82-4.

⁵⁸ See for example Demars, 47ff.

⁵⁹ Lucy Sprague Mitchell, *Two Lives—The Story of Wesley Clair Mitchell and Myself*. (New York: Simon and Schuster, 1953), 142. <http://babel.hathitrust.org/cgi/pt?id=inu.30000047733799;view=1up;seq=9>

⁶⁰ Carrie Le Conte. *Yo Semite 1878 Adventures of N & C*, 15. C. Frank Brockman's "Development of Transportation to Yosemite" includes detailed accounts of the various means of travel to and within what is now Yosemite National Park, including comments from early visitors about their experience. The article was serialized in the *Yosemite Nature Notes* issues of September through December, 1943 (vol. XXII, nos 9-12). http://www.yosemite.ca.us/library/yosemite_nature_notes/22/

⁶¹ *Ibid.*, 49-50.

⁶² *Ibid.*, 99.

⁶³ Linnie Marsh Wolfe. *Son of the Wilderness: The Life of John Muir*. (Madison, Wisconsin: University of Wisconsin Press, 1945), 96. Michael L. Smith calls attention to the emulation of Humboldt among Muir's predecessors in California. For example, he points out George Davidson's Humboldtian view, "knowledge is a web of connections & dependent principles evolved from the law of nature. Like the web of the spider it is beautiful, symmetrical." (p. 64) In the case of Clarence King, Smith simply labels him "Humboldt with a six-shooter." (p. 82) *Pacific Visions: California Scientists and the Environment 1850-1915*. (New Haven, Connecticut: Yale University Press, 1987).

⁶⁴ Smith, 5. Of Muir, the gifted amateur scientist, Louis Agassiz said, "Here is the first man who has any adequate conception of glacial action." Wolfe, 160.

⁶⁵ *Autobiography*, 243.

⁶⁶ *Ramblings*, August 11, 1870 entry.

⁶⁷ Joseph's brother John also took students to the Sierra.

⁶⁸ "When we try to pick out anything by itself, we find it hitched to everything else in the Universe." John Muir. *My First Summer in the Sierra*, 1911, 110. <http://www.gutenberg.org/ebooks/32540>

"I will follow my instincts, be myself for good or ill, and see what will be the upshot. As long as I live, I'll hear waterfalls and birds and winds sing. I'll interpret the rocks, learn the language of flood, storm, and the avalanche. I'll acquaint myself with the glaciers and wild gardens, and get as near the heart of the world as I can." Quoted in Wolfe, 144. See also p. 130, describing Muir as Yosemite guide, eager to point out the action of glaciers in creating Yosemite Valley.

⁶⁹ Stephens, 207.

⁷⁰ Royce, 330.

⁷¹ Though the article was published in a non-specialist periodical, Joseph stressed that it was nevertheless an important contribution to science, written in a style accessible to the educated reader. Joseph Le Conte. "Memoir of John Le Conte, 1818-1891." Read before the National Academy [of Sciences], April, 1894, 383. <http://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/le-conte-john.pdf>

⁷² Senger also earned a University of California Ph. D. in 1888.

⁷³ Joseph N. Le Conte. *Journal of 1889 High Sierra Trip*. (Berkeley: Joseph N. Le Conte Papers, Bancroft Library, University of California), 147.

⁷⁴ Little Joe's work for Davidson and in subsequent years echoed Humboldt's emphasis on taking extensive measurements with the best scientific instruments of his day. Like Humboldt, Little Joe would also produce greatly improved maps of the mountain country that he explored.

⁷⁵ *Ibid.*, 31.

⁷⁶ At the time of the climb, Yosemite National Park's boundaries included the Ritter-Banner-Minarets area, now in the Ansel Adams Wilderness. As a result, Mt. Ritter, which Helen climbed with J. N. a few years later, was the highest peak in Yosemite National Park—by 29 feet. Mt. Lyell is now the highest peak in Yosemite.

⁷⁷ J. N. Le Conte, *Recollections*, 41.

⁷⁸ *Sierra Club Bulletin*, I, 4 136 ff.

⁷⁹ *Sierra Club Bulletin*, II, 2, (May 1897), 79ff. Stanford's founding president David Starr Jordan and his wife followed a somewhat similar course when they visited Kings Canyon in 1899 with several faculty friends. His account can be found in *The Days of a Man: Being Memories of a Naturalist, Teacher, and Minor Prophet of Democracy*, https://ia601407.us.archive.org/13/items/daysofmanbeingme01jord/daysofmanbeingme01jord_djvu.txt, 648-654.

⁸⁰ Palache, "College" chapter.

⁸¹ J. N. Le Conte, *Recollections*, 27.

⁸² *Ibid.*, 33. Both Le Contes loved seeing the new inventions and equipment of this incredibly rich era. Little Joe described his father at the annual San Francisco Mechanics Fair in the early 1880's, looking for the first time at an incandescent lamp "with joy and astonishment." *Recollections*, 15.

⁸³ Stephens, 154.

⁸⁴ Joseph Le Conte, *Autobiography*, 262.

⁸⁵ Stephen Fox. *John Muir and His Legacy: the American Conservation Movement*. (Boston: Little, Brown and company, 1981), 81. Fox adds that Muir was losing touch with the science of his day, as it turned to laboratories and microscopes.

⁸⁶ See *Pacific Visions*, 5, 124.

⁸⁷ Perry Byerly and George D. Louderback. "Andrew Cowper Lawson July 25, 1861-June 16, 1952." *National Academy of Sciences Biographical Memoirs* Vol. XXXVII (New York: Columbia University Press, 1964), 187.

⁸⁸ Palache, "College" chapter.

Bancroft Library holdings consulted:

The Bancroft Library, University of California, Berkeley: Papers of Joseph Nisbet Le Conte, C-B, Carton 1, Vol. 35 Regional Oral History Collection

Sources of photographs include the Bancroft Library; *Blue and Gold* yearbooks; early issues of the *Sierra Club Bulletin: The Chronicle of the University of California*; "West of Eden: The University and the Environment." Issue #3, (Spring 2000);, and William Carey Jones, *Illustrated History of the University of California*, (San Francisco, CA: F. H. Dukessmith, 1895).