

JOHN MUIR'S GLACIAL GOSPEL



PAUL D. SHEATS

In the year 1893, John Muir returned to the British Isles after an absence of nearly a half-century. He first visited his native town of Dunbar, Scotland, and then made a pilgrimage south to the English Lake District, where he paused at the grave of the poet William Wordsworth. Wordsworth's gravesite is impressive: ancient yews shade the green churchyard, a mountain stream whispers by, and the bald Lakeland fells rise on all sides. "A robin came," Muir noted in his journal, "and sang on the maple as I stood with damp eyes and a lump in my throat. What a pity it is that Wordsworth, with his fine feeling for nature, died without knowledge of the glacial gospel!"¹

This anecdote provokes several observations. It offers a valuable insight into Muir's specifically literary enthusiasms, into his respect for Wordsworth in particular and Wordsworth's generation of romantic writers in general. Particularly provocative and surprising, however, is his final phrase and the assumptions that apparently go with it. The very idea of glaciers suggests not robins and gentle tears but more awful and threatening objects. To the poet Shelley, for example, the glaciers of Mont Blanc seemed to "creep like snakes that watch their prey," and for his wife "mountains of ice" at the pole offered an appropriate setting for the death of Frankenstein's monster. In an early poem unknown to Muir, Wordsworth had himself regarded the Alpine glaciers with fear and awe, presenting them as regions of silence and death, hostile to humanity. It comes as no surprise to readers of Muir, however, that he refuses to endorse such traditional banishment of glaciers to the implied category of the fearful "sublime." Instead, he groups them with the birds, butterflies, and daisies that were the objects, for most Victorian readers, of the best-known poems of Wordsworth, and regrets above all that this poet, with his "fine feeling for nature," was denied a knowledge of the "glacial gospel."²

What does Muir mean by this phrase? He may, of course, intend "gospel" loosely, to refer to geological theories that postdated Wordsworth's death in 1850; an obvious example would be the theory of a universal "ice age" promulgated by the famous Swiss glaciologist, Louis Agassiz. John Muir, on the other hand, was not one to take the word

Paul Sheats teaches English literature at the University of California at Los Angeles and is the author or editor of several books on English romantic literature. He studied geology and biology at Harvard, and has combined these interests with literary studies in pursuing his current investigation of natural landscape in literature and art.

“gospel” lightly. As a boy he had been forced to memorize every word of the four Biblical Gospels by his father, whose Calvinist faith placed an ultimate and usually grim stress on the word of Scripture. As the elder Muir frequently reminded his offspring, the Word alone stood between them and eternal fire, and as a preaching elder of the Disciples of Christ he probably went on to emphasize the revolutionary power of the Gospels, opposing them to the Law of the Old Testament as the spirit opposes the letter, the new the old, life death.³ Given the intensity of this Biblical education and the gravity of the moment, it is likely that Muir intended the word “gospel” seriously: glaciers, like the glad tidings of the Biblical Evangelists, are the vehicles of a new, divine dispensation.

It is this secondary possibility — that Muir interpreted glaciers themselves as a kind of gospel — which this article explores. His early glacier-writings offer striking examples of an intensely moral vision of the ancient glaciers of Yosemite, and also of the interpretive posture they called into being, of a Muir who merged the assumptions of the natural scientist with those of the evangelical preacher, the observer with the believer. It may well have been his Yosemite glacier work that shaped his own personal vocation, that of a preacher of the “gospel” of God’s wilderness. Before looking at his conception of glaciers, however, we may briefly recall the circumstances that led him to study the ancient ice-streams of the Sierra Nevada. We may easily forget that when Muir came to California, in 1868, he brought with him a geological training that was by no means unsophisticated. He had studied geology, among other sciences, at the University of Wisconsin, where his instructor was Ezra Slocum Carr, the husband of his dear friend and correspondent, Jeanne Carr, and a former student at Harvard of Agassiz.⁴ It was probably at Wisconsin, long before he saw the Sierra, that Muir became an advocate of the “ice age” theory, and on Carr’s field trips through the glaciated landscape around Madison, he would have learned the elements of practical glaciology — the methods Agassiz had used, for example, to measure the movement of the great glaciers of the Bernese Oberland. Little survives in Muir’s writings, however, to suggest that such training was particularly significant to him until his first extended look at the glaciated landscape of the Sierra in the summer of 1869.



Courtesy, The Bancroft Library

Professor Ezra Slocum Carr. It was through Carr's geology courses, his class field-trips over the glacial landscape of Wisconsin, and his personal library that Muir developed his interest in and advanced knowledge of geology, and glaciers in particular.

Louis Agassiz, the prominent European naturalist and world-famous the scientist, came to America in 1846. The following year he established himself in Boston and joined the faculty of Harvard University as chair of zoology and geology at Lawrence Scientific School. Although Muir and Agassiz corresponded, they never met. On the occasion that Agassiz was in California he was too aged and ill to visit Muir in Yosemite, and Muir was too involved in recording the movement of his glaciers to spare the time to travel to San Francisco.



Courtesy, The Bancroft Library

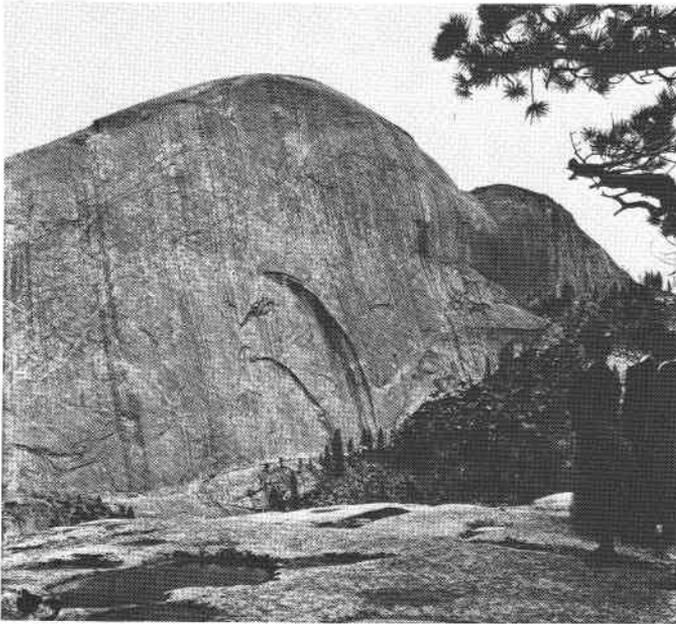
The published account of Muir's first summer in the Sierra is regarded by many as his finest book, an ecstatic celebration of both a mountain landscape and a mountain self. The book also suggests, however, that the trip stimulated his interest in glaciers. High on the Mono Trail near Tamarack Creek he recognized signs of glacial action — "erratics," strangely isolated boulders, "still and deserted," that glacial ice had brought from afar. Remembering Moses' words in Exodus, he described them as "strangers in a strange land," a phrase he had echoed a year earlier when describing his own lonely wanderings in the American South.⁵ Nearby he found glacial striations, parallel scratches recording the movement and direction of the vanished glacier, and glacial polish, "a strange, raw wiped appearance" where the granite had been smoothed and polished by the great weight of ice. All of this, he noted, was "a fine discovery."⁶ As his party moved still higher we find Muir excitedly recognizing other glacial phenomena — glacial lakes, glacial meadows, various types of moraines — and see him in the act of forging hypotheses that would become central tenets of his published research — a grand Tuolumne Glacier that overrode the Tuolumne-Merced divide and descended into Tenaya Canyon, for example, or the startling fact that Yosemite Valley itself once brimmed with ice. On July 14, as he crossed Yosemite Creek, he looked longingly north, toward the glacier-scoured granite of its upper basin:

Up towards the head of the basin I see groups of domes rising above the wavelike ridges. . . .
Would that I could command the time to study them! . . . Its glacial inscriptions and sculptures, how marvelous they seem, how noble the studies they offer!

If this account in fact reflects his thought at the time, Muir seems to have sensed his destiny with some precision.⁷ Within the year that spot would become the site of several of his most important glacial discoveries.

However clairvoyant he may have been, there can be no doubt that an immediate and powerful catalyst to his glacial work was his discovery, by April 1870, that the eminent State Geologist, Josiah Whitney, had made a blunder of colossal proportions in denying the glacial origin of Yosemite Valley, a blunder Muir must have felt he was born to set right. Through 1870 he labored to amass contrary evidence. By August, for example, a

newly identified medial moraine beneath Half Dome helped persuade a potential ally, Joseph LeConte, that “a glacier once filled Yosemite.”⁸ The following year, 1871, saw the discovery of what he described to his new friend Emerson as a “magnificent truth” — unambiguous evidence that a hitherto undetected tributary glacier had flowed south through Yosemite Creek basin into the Valley. Muir’s explorations of this basin, where he had sensed his destiny two years earlier, bore fruit in December in his first article, a memorable study of the ancient glaciers that appeared in the *New York Tribune*. Days after he sent it off he made another discovery, of a small living glacier in the shadow of Merced Peak.



Edward T. & Marion R. Parsons Collection, Sierra Club

The backside of Half Dome in Yosemite Valley showing glacial marking.

A letter to Mrs. Carr in September suggests the intensity of this “ice work.”

The grandeur of these forces and their glorious results overpower me, and inhabit my whole being. Waking or sleeping I have no rest. In dreams I read blurred sheets of glacial writing, or follow lines of cleavage or struggle with the difficulties of some extraordinary rock form. Now it is clear that woe is me if I do not drown this tendency toward nervous prostration by constant labor in working up the details of this whole question. I have been down from the upper rocks only three days and am hungry for exercise already.⁹

Muir’s commitment was total, even obsessive. “You will not find in me one unglacial thought,” he writes to Mrs. Carr in 1871, and in March, 1872, “I’m not going to die until done with my glaciers.”¹⁰ At times he seems oppressed by the magnitude of the task, and disclaims any pretension to “grave science” or “exact research.” He dismisses his work as “drifting,” “methodless roving.”

This was my ‘method of study’: I drifted about from rock to rock, from stream to stream, from grove to grove. . . . It is astonishing how high and far we can climb mountains that we love.

Muir nevertheless asserts that his object is the discovery of truth, what he calls the “true meaning and interpretation” of the Lord’s mountains. He conceives as well of a serious methodology — “to spell out, by close inspection, things not well understood.”¹¹ Repeatedly he emphasizes “close inspection”: patient, exact, and intimate observation.

All depends upon the goodness of one’s eyes. No scientific book in the world can tell me how this Yosemite granite is put together, or how it has been taken down. Patient observation and constant brooding above the rocks, lying upon them for years as the ice did, is the way to arrive at the truths which are graven so lavishly upon them.¹²

Muir does not simply examine the traces left by the ancient glacier; he imagines himself *as* the glacier in order to reconstruct its relationship to the rocks it shaped. Here and elsewhere, his objective is not a general theory of glaciation — he seldom follows John Tyndall, the English geologist, for example, in seeking a mathematical description of the physics of ice movement — but rather the re-creation of these very glaciers as they might have appeared to the senses:

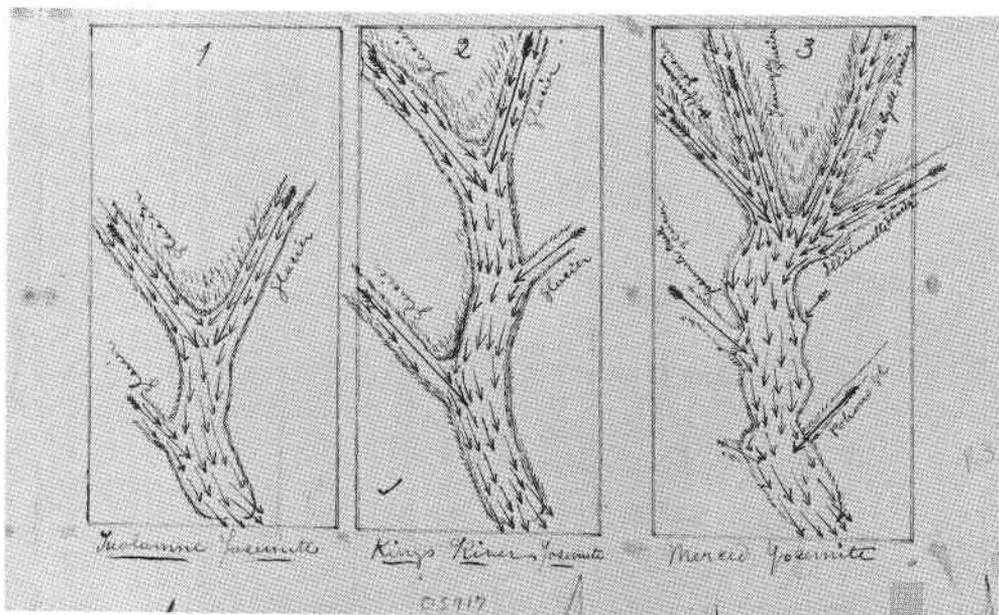
I will brood above the Merced Mountains like a cloud until all the ice-rivers of this mighty system are fully restored, each in its channel, harmonious as a song. Do you say send us something about ice and lakes? . . . Bide a wee, I am not idle; you will hear some day around the South Dome, not the crash of worlds, but the crush of swedging, crevassing glaciers. . . .¹³

Muir entered these words in his journal in October, 1871, shortly after he discovered a living glacier; he apparently addresses the scientific community, which he will convince by *showing* them, not the catastrophe proposed by Whitney (“the crash of worlds”) but the ancient glaciers themselves, in all their “swedging, crevassing” reality.¹⁴ About this time, in a less exultant mood, he wrote to Mrs. Carr that he would wear “tough gray clothes, the color of granite, so no one could see or find me but yourself.”

Then would I reproduce the ancient ice-rivers, and watch their workings, and dwell with them.¹⁵

His goal is that of the artist and evangelist as well as the scientist. He seeks not only to elucidate causes, but to “reproduce” them, and to persuade his recalcitrant audience with a visionary force that is thus irresistible. His medium is the imagination, which he described a few years later as “healthful and real,” and we may measure his success both by the accuracy and point of his observations and the power and vividness of his prose. It is significant that his most forceful graphic writing at this time describes not the residual glaciers he discovered in 1871 but the ancient, invisible glaciers that were the beneficiaries of his geological art.¹⁶

Geological results came quickly. By the summer of 1872 measurements of the movements of the Lyell and Maclure glaciers had provided what Muir’s young helper, Merrill Moores, recalled as “the final and convincing proof” that the canyons of the lower Sierra were of glacial origin.¹⁷ In that year and the next John Muir extended his studies across and along the range, and in 1874 published, at last, his seven-part *Studies in the Sierra*. Although the scientific assumptions behind this were in part mistaken — Muir neglected the role of water erosion in the pre-glacial period, for example, and mistakenly assumed, after Agassiz, the Sierra glaciers to be part of a continental ice sheet that reached the sea — he nevertheless succeeded in demonstrating the paramount role of ice in the creation of the Sierra landscape and, in particular, Yosemite Valley. His fieldwork remains remarkable for its extent and detail. As one of the discoverers of the Valley, Dr. Lafayette H. Bunnell, put it when balancing Muir’s theory against Whitney’s, “Mr. Muir has



©Muir-Hanna Trust

Three drawings by John Muir made to illustrate his point, "that there are many Yosemite valleys identical in general characters. . . ." And that, "all Yosemites occur at the junction of two or more glacial cañons." See Muir's *Studies in the Sierra* "Mountain Sculpture Origin of Yosemite Valley."

spent long years of study upon the glacial summits of the Sierra, and if an enthusiast, is certainly a close student of nature."¹⁸ Other scientists commended him. Tyndall gave him an aneroid barometer and other instruments; Louis Agassiz praised his work, and was sent a copy of Muir's *Tribune* article by Mrs. Carr.¹⁹ Muir's glacier-work established him within the scientific community as a serious and dedicated worker, a man to be taken seriously.

If we turn from Muir's passionate field-work to the vision of glaciers that at once resulted from and inspired it, we are struck by the religious, moral, and imaginative component in that vision. Muir sees the created world within the terms of natural theology and the so-called "argument from design," which views nature as an expression of God's purposes, insofar as human reason can infer them from observation. In this he represents an interpretative tradition that in its modern form extends back to the late seventeenth century and the work of such "physico-theologists" as the great John Ray. Louis Agassiz stood firmly in this tradition, as is suggested by his delight in calling glaciers "God's great plow."²⁰ What distinguishes Muir's "glacial eye" is less its fundamental assumptions than the way it sees — the vivid detail, the religious and moral passion, the sensitivity to the witnessing power of nature, as it speaks forth the glory and love of God. In the case of glaciers, then, he decries the traditional literary emphasis on their fearful sublimity. An amusing example occurs when he responds to the infidelity to glaciers of his dear friend Mrs. Carr.

But glaciers, dear friend — ice is only another form of terrestrial love. I am astonished to hear you speak so unbelievably of God's glorious crystal glaciers. "They are only pests," and you think them wrong in temperature, and they lived in "horrible times". . . . You speak heresy for once, and deserve a dip in Methodist Tophet, or Vesuvius at least.²¹

In his more formal writing, as in his journals, Muir consistently stresses not the inhuman or “horrible” qualities of glaciers but their power to create, as evidenced by the landscape they have left behind, and their power in present time to unify and harmonize that landscape. In both respects, glaciers take on for him the function of a gospel — they imply attributes of their Creator which were ignored or denied by competing theories, such as Whitney’s catastrophism.

Muir’s first assumption, that glaciers constituted creative agents of a creative God, emerges clearly from his account of the building of the range in which glaciers like the Biblical Gospels bring rebirth and renewal, a new earth if not a new heaven. Beneath their quiet surfaces they transformed what he supposed to be a largely featureless landscape into “the delightful variety of hill and dale and lordly mountain that mortals call beauty.” As the ice receded, life followed in every form, “warming and sweetening and growing richer as the years passed away over the mighty Sierra so lately suggestive of death and consummate desolation only.”²² Like the canyons they carved, these bringers of life and beauty were the more blessed in Muir’s eyes because they were not occasions of disruption or disorder. He saw their mighty energies as ultimately derived from the most fragile and yet common of natural objects, the snowflake.

The Master Builder chose for a tool, not the earthquake nor lightning, . . . not the stormy torrent nor eroding rain, but the tender snow-flowers, noiselessly falling through unnumbered seasons, the offspring of sun and sea.²³

In a memorable passage of the 1871 *Tribune* essay, Muir meditates on the “sublimity” of the “life of a glacier”: unlike the rivers, the ocean, or the wind, which speak aloud and proclaim their modes of working and power,

glaciers work apart from men, exerting their tremendous energies in silence and darkness, outspread, spirit-like, brooding above predestined rocks unknown to light, unborn, working on unwearied through unmeasured times, unhalting as the stars, until at length, their creations complete, their mountains brought forth, homes made for the meadows and the lakes, and fields for waiting forests, earnest, calm as when they came as crystals from the sky, they depart.²⁴

In some of his finest prose, Muir here endows glaciers with divinity. Their work is invisible, unwearied, unmeasured, transcendent, and yet benign. Unlike the Burkeian concept of a sublimity based on fear, this, if distant and majestic, is totally benign: this glacier would be at home with the robins and lakes around Wordsworth’s grave. The origins of Muir’s language suggest the height of his vision: it is borrowed in part from Genesis, where the “spirit of God” preceded all light and form, and in part from Milton’s *Paradise Lost* — one of the three books he had taken with him on his walk through the South four years earlier. In his account of creation, Milton had addressed the Holy Spirit as being present from the first,

. . . and with mighty wings outspread Dove-like satst brooding on the vast Abyss And mad’st it pregnant.²⁵

Muir borrows Milton’s “brood” and “outspread,” and transfers both to the second creation wrought by the glaciers, which are likewise “pregnant” with a new world.

In a contrasting account of the death of a glacier, later in this remarkable essay, Muir takes us to one of the high cirques of the Yosemite Creek basin, to look more closely at the very act of creation that accompanied the departure of the ice:

Its last work is done, and it dies. The twin lakes are full of pure, green water, and floating masses of snow and broken ice. The domes, perfect in sculpture, gleam in new-born purity, lakes and domes reflecting each other bright as the ice which made them. God's seasons circle on, glad brooks born of the snow and the rain sing in the rocks, and carry sand to the naked lakes, and, in the fullness of time, comes many a chosen plant . . . grasses, and daisies, and blooming shrubs, until lake and meadow growing throughout the season like a flower in Summer, develop to the perfect beauty of today.²⁶

We see here the birth of a landscape, couched in a vivid language that again reminds us of the Biblical creation in Genesis. Issuing from the shaping ice in gleaming, essential purity, the naked landscape is clothed first by soil and then by life. One senses here that for Muir the sanctity of the high Sierra landscape proceeded from the temporal proximity of God: the nearness of Creation itself in time. He implicitly rejects the thundering, threatening Jehovah of the Old Testament, who spoke to Job out of the whirlwind, and instead hears his glaciers speak of the comprehensible God of the New Testament, of the "mild gentle beautiful." Here, then, we see one sort of "glad tidings" brought by a "glacier gospel": tidings of a working, building God who through these silent instruments brings forth beauty and order in the fullness of time.

A second attribute of glaciers, as Muir envisioned them, emerges from the landscape they left behind them: their power to reveal the essential harmony of the natural world. Most people, he believed, failed to recognize the true order of a mountain landscape. At best, he wrote in an ironic moment, they perceived "that kind of natural harmony which we commonly call confusion."²⁷ Looking with a "glacial eye," however, we see the essential harmony beneath such apparent disorder, and learn what Muir recognized as early as 1869 as "lessons of unity and interrelation."²⁸ In the early 1870s glaciers supply the key to his interpretation of the visible landscape. Looking down into Yosemite Valley from his perch at Sunnyside Bench, for example, he amused himself by demonstrating how the angle of sun and shadow on the receding glacial ice led to the present arrangement of terminal and lateral moraines, and in turn to the arrangement of forest trees and even to the course of the river Merced itself. "Thus it appears," he wrote, "that everything here is marching to music, and the harmonies are all so simple and young they are easily apprehended by those who will keep still and listen and look."²⁹ A more famous occasion of such "harmonies" was the sublime spectacle of "snow banners" flying from the great peaks of the crest before a north wind. Such splendor, Muir shows with zest, is the result of a chain of causes: the disposition of shadows on the northern faces of peaks fosters glaciers, which in turn carve the concave bowls that supply the snow for the north wind to shape into snow banners. "It appears," he concludes in a late version of the essay, "that shadows in great part determine not only the form of lofty icy mountains but also those of the snow banners that the wild winds hang on them."³⁰ On another occasion, noting that the general south-west thrust of the glaciers threw up lips and ramps along the southern walls of such canyons as Yosemite, he points out that legged creatures generally appropriate such easy places for their trails. "So extensively," he concludes, "are the movements of men and of animals controlled by the previous movements of certain snow-crystals combined as glaciers."³¹

In each case the glacial theory links events and phenomena we would otherwise suppose to be independent. It makes evident Muir's off-quoted observation that "when we try to pick anything out by itself, we find it hitched to everything else in the universe."³² His most important methodological advance in 1871 may indeed have been to apply this truth to Yosemite Valley itself. When he first sought the Valley's origins, he wrote Mrs. Carr, he considered it an independent entity, an end in itself. "Then I said, 'You are

attempting what is not possible for you to accomplish. Yosemite is the *end* of a grand chapter. If you would learn to read it go commence at the beginning.” The Valley should not be seen as a sublime but solitary exception, “full of chaos, unaccompanied and parentless,” but as a participant in the general community of causes.³³ The emphasis of Muir’s work shifted in 1871 from the Valley to the tributary glaciers that formed it, the causes of which it was the grand effect. Similar causes had carved, he discovered, at least two other “Yosemites,” “sister valleys” in the Sierra, with corresponding features that testify to their common origins.

In this way, by stressing its glacial connections to prior causes, Muir effectively denied the Valley the status of an “exceptional creation.” With proper admiration for the grandeur of its mighty but unseen creators — the vanished glaciers — even it could pale into insignificance:

When we walk the pathways of Yosemite glaciers and contemplate their separate works — the mountains they have shaped, the canons they have furrowed, the rocks they have worn, and broken, and scattered in moraines — on reaching Yosemite, instead of being overwhelmed as at first with its uncomparated magnitude, we ask, *Is this all?* wondering that so mighty a concentration of energy did not find yet grander expression.³⁴

A second characteristic of the “glacial gospel,” from Muir’s point of view, was thus that it restored a moral connection to such single wonders as the Valley, rendering them comprehensible effects of a comprehensible cause, and thus restoring implicitly to the Creator the attributes of openness, accessibility, and, by implication, love. Muir’s objection to such catastrophic theories of the Valley’s origins as Josiah Whitney’s was moral as well as evidential: random and unique, a catastrophe carried with it the implication that God is inscrutable and even chaotic. Not so, Muir insisted: “God is living and working, working like a human being by human methods and though essentially always unsearchable and infinite yet writing passages that we can understand and coming within the range of our sympathies.”³⁵ God is connected by such means as glaciers to us and to all his creation.

Viewed in these ways, as agents of a second creation and bringers of harmony and connection, glaciers might well supply the *content* of a “gospel,” but Muir’s writings in 1871 suggest as well that he conceived them within the *form* of a gospel, to be approached through the “reading” or interpretation of a text. We are apt to forget that the vivid description, quoted above, of the death of a glacier was written before he discovered his first live Sierran glacier, and that it was thus the product of interpretation — imagination guided by observation and inference. Later in his life Muir would gratefully visit the great ice-streams of the world, in Alaska, the Alps, and the Himalayas, but at this time, unlike his European contemporaries Tyndall and Agassiz, his subjects were glaciers that no longer existed; his principal work was historical. He repeatedly emphasizes the *creativity* of this work by referring to the glacial record as if it were a text, “graven” on the landscape, which he is qualified to read and interpret. A glimpse of Yosemite Valley in the summer of 1869, for example, prompted him to write: “a grand page spread here and I would gladly give my life to be able to read it.” When he revised this passage for publication, years later, he sharpened the metaphor: “a grand page of *mountain manuscript*.”³⁶ Elsewhere at this time he speaks of glacial “inscriptions,” “blurred sheets of glacial writing,” “glacial manuscript,” “glacial characters” and, appropriately, “historic lithographs” left by a vanished glacier. As he sets out on an exploration of the Yosemite creek basin, he is “confident” that there is “a writing for me somewhere on the rock.”³⁷

To his mother he writes of “finding many a mountain page glorious with the writing of God and in characters that any earnest eye could read.”³⁸ The *Tribune* article of December, 1871, is built around the metaphor of landscape as book: “In this condition,” he writes, referring to a weather-worn volume he had found in the forest, “is the great open book of Yosemite glaciers today: its granite pages have been torn and blurred by the same storms that wasted the castaway book.”³⁹

Muir sometimes tempts us, as he did his fashionable acquaintances in Oakland, to regard him as a natural, untutored genius, self-exiled from the intellectual culture of his age. Here, however, he works, typically, within a tradition closely associated with two of the formative intellectual forces in his life — natural science and evangelical Protestantism. The metaphor of nature-as-book, which he applies with such frequency to the glacial landscape of Yosemite, is at least as old as the middle ages.⁴⁰ Galileo had employed it, as had the poet Milton, and in Muir’s own century he knew it in the works of the New England transcendentalists, of Charles Darwin, and very probably the lectures of his professor, Ezra Carr, who (he remembered) had laid the “great book of Nature” before him.⁴¹ The metaphor implies that nature is a book, written by God for human understanding, and that it stands beside and supplements that other divinely inspired book of revealed truth, the Bible. The seventeenth-century divine, Sir Thomas Browne, wrote, for example, of the “two bookes from whence I collect my divinity — besides the written one of God, another of his servant Nature, that universal and publick Manuscript, that lies expans’d unto the eyes of all.”⁴² Although Muir had used this metaphor sparingly in earlier writings, the assumption behind it — that landscape is a second gospel written by God — applied with obvious and peculiar force to the Yosemite region and to the interpretation of the traces left by the departed glaciers. It requires little metaphor to see glacial striae, rock forms, and moraines, as a *text*, open to those qualified to read it. On at least two occasions Muir carried the traditional metaphor to its logical extreme, describing glaciers as writing instruments. In his journal for 1872, “glaciers, avalanches, and torrents” became the “pens with which Nature produces written characters most like our own.”⁴³ In a letter to his mother the previous November he compared the glaciers of Yosemite to the pens, not of Nature, but of God. Yosemite, he wrote, is

... one chapter of a great mountain book written by the same pen of ice which the Lord long ago passed over every page of our great Sierra Nevadas. I know how Yosemite and all the other valleys of these magnificent mountains were made, and the next year or two of my life will be occupied chiefly in writing their history in a human book — a glorious subject, which God help me preach aright.⁴⁴

The movement of thought is swift and sure, from God’s book to his own — which later in the letter he calls his “mountain gospel” — and then to his new vocation, that of a preacher of this “glorious subject.”

To preach the “gospel” of God’s wilderness in fact remained Muir’s vocation, and it does not seem far-fetched to suppose that one of his great personal achievements during these first Yosemite years was this perception of himself as an interpreter and preacher of the second gospel, the book of nature. If Muir had never come to Yosemite, if he had followed Humboldt to the Amazon as he had planned, he would still, no doubt, have become a naturalist. What is striking about his situation in Yosemite, however, is the clarity with which its glaciated landscape put the ancient metaphor into practice, allowing and indeed encouraging Muir to adopt the role of an evangelist reading the texts — gospels — left by the vanished ice. As he sought the “writing” on the rocks he was at the same time a scientist, a colleague of Agassiz and Tyndall, and a reader of the gospel,

a preacher like his father. The ancient glaciers' gift to the young John Muir, then, may have been a vision of his true vocation: an evangelist of God's wilderness.

As reader of the glacial gospel, furthermore, Muir may have clarified his relationship to his father, also a preacher, also profoundly committed to the word of God in Scripture. The letter to his mother, quoted above, may have been intended as well for his father — a reminder of their mutual dedication to the ministry of the Word and a defense of Muir's very different text, the "book" of the glaciers. Muir had no doubt heard his father warn against this heresy, and insist that the book of Nature was no substitute for Scripture. In a letter written in 1874, Daniel Muir repeated that warning, urging his son to give up the things of this world, to burn his book, and to return to the revealed Gospel. "You cannot warm the heart of the Saint of God," he wrote, "with your cold icy topped mountains. O my dear son, come away from them to the spirit of God and his Holy Word."⁴⁵

No answer to this appeal survives. It would not be surprising if by 1874 John Muir had given up hope of communicating his views to his father, although such remonstrances as this must have given him pain. The answer he might well have given, however, is written nowhere more clearly than in his Yosemite glacier writings, and in the vision they present of the ancient glaciers. As agents of rebirth, as bringers of visible connection to the disparate parts of the landscape, and above all as the sublime writing instruments of a loving God, these vanished streams of ice were yet another incarnation of what his father knew as "the spirit of God and his Holy Word." As John Muir put it to Mrs. Carr, "ice is only another form of terrestrial love."

NOTES:

1. Linnie Marsh Wolfe, *Son of the Wilderness: The Life of John Muir* (Madison: University of Wisconsin Press, 1945), p. 264. For their expert assistance in preparing the following essay, I should like to thank Dr. Ronald Limbaugh and Ms. Kirsten Lewis of the Holt-Atherton Center for Western Studies, and Ms. Mary Vocelka, Librarian, Yosemite National Park.

2. See Wordsworth's *Descriptive Sketches*, lines 366 ff. (1893); Shelley's "Mont Blanc," lines 100-101; Mary Shelley, *Frankenstein* (New York: New American Library, 1965), p. 202. The category Muir rejects is that of the "sublime," the fearful associations of which survive in such recent works as Fred Hoyle's *The Ultimate Human Catastrophe* (New York: Continuum, 1981).

3. On the Disciples' distinction between the Gospel and the Law, see Alexander Campbell's "Sermon, Delivered before the Redstone Baptist Association, . . . on the 1st of September, 1816," in Selina Huntington Campbell, *Home Life and Reminiscences of Alexander Campbell* (St. Louis: John Burns, 1882), p. 191 ff.

4. On Muir's work with Carr, see Wolfe, p. 76. In *The Story of My Boyhood and Youth* (Madison: University of Wisconsin Press, 1965) Muir points out that Fountain Lake, near their first home, lay next to a "glacier meadow," p. 51, and gives an explanation of nearby glacial "kettles," p. 80.

5. Exodus 2:22; John Muir, *A Thousand Mile Walk to the Gulf* (Dunwoody, GA: Norman Berg, n.d.), p. 58.

6. John Muir, *My First Summer in the Sierra* (Boston: Houghton Mifflin, 1979), pp. 100-101.

7. *My First Summer*, p. 110. See also pp. 197, 208. As Limbaugh points out to me, the journals of 1869 are lost; the earliest manuscripts that survive were transcribed perhaps as many as eighteen years later, and these in turn were thoroughly revised for the published version of *My First Summer in the Sierra* in 1911. For one such revision, see the entry cited on p. 15.

8. Joseph Le Conte, *A Journal of Ramblings Through the High Sierra of California* (New York: Ballantine, 1971), p. 64.

9. William Frederic Badè, *The Life and Letters of John Muir* (Boston: Houghton Mifflin, 1924), I. 294-95.

10. Badè, I. 299, 319.

11. Linnie Marsh Wolfe, *John of the Mountains: Unpublished Journals of John Muir* (Madison: University of Wisconsin Press, 1938) p. 108; *Overland Monthly*, 10, (August, 1873), p. 151; Badè, I. 293.
12. Badè, I, 300.
13. Wolfe, *Journals*, p. 86. For Tydall's use of mathematics, see his *Glaciers of the Alps* (London: Longmans, 1906), esp. "Pressure Theory," p. 346 ff.
14. Muir's scornful references to the "crash of worlds" may echo a quotation Whitney had used in the following passage from his *Geology of California* (1865), which describes the imagined splitting of Half Dome: "the lost half having gone down in what may truly be said to have been 'the wreck of matter and the crash of worlds.'" Cited in Badè, I. 275.
15. Badè, I, 300-301.
16. See, for example, Muir's vision of the ancient glaciers during his exploration of the Tuolumne Canyon in 1871 (*Overland Monthly*, 10, August 1873, pp. 142-143) and in Yosemite Valley (*Journals*, p. 59). He comments on the imagination in his journal for September, 1875 (*Journals*, p. 226).
17. Cited in *John Muir: To Yosemite and Beyond*, ed. Robert Engberg and Donald Wesling (Madison: University of Wisconsin Press, 1980), p. 99.
18. Lafayette Houghton Bunnell, *Discovery of the Yosemite*, 4th ed., (Los Angeles: Gerlicher, 1911), p. 333.
19. Badè, I. 343.
20. See Edward Lurie, *Louis Agassiz: A Life in Science* (Chicago: University of Chicago Press, 1960), p. 98.
21. *Mountains of California*, [Full reference, n. 30] pp. 16-17.
22. Badè, I, 266.
23. "Studies in the Sierra, I," *Overland Monthly*, 12, (June, 1874), 393.
24. John Muir, "Yosemite Glaciers. The Ice Streams of the Great Valley. . .," *New York Tribune*, December 5, 1871, p. 8. Reprinted by Engberg and Wesling, p. 80.
25. *Paradise Lost*, I 20-22.
26. See Engberg and Wesling, p. 86.
27. John Muir Papers, undated fragments 08528.
28. Badè, II, 29; *My First Summer*, p. 240.
29. Wolfe *Journals*, p. 111.
30. John Muir, *The Mountains of California* (Dunwoody, GA: Norman Berg, n.d.), p. 47.
31. "Studies in the Sierra, III," *Overland Monthly*, 13 (July, 1874), 74.
32. *My First Summer*, p. 157.
33. Badè, I, 294, 287.
34. "Studies in the Sierra, III", p. 79.
35. John Muir Papers, undated fragment 08514. For the "catastrophism" espoused by Cuvier and Agassiz, see Lurie, pp. 61, 97-100.
36. *My First Summer*, p. 102; see Engberg and Wesling, p. 54, for the earlier version.
37. *My First Summer*, p. 110; Engberg and Wesling, pp. 80-81; Badè, I. 290, 294, 305.
38. Badè, I. 314.
39. Engberg and Wesling, p. 77.
40. On the history of the nature/book metaphor, see Ernest Curtius, *European Literature and the Latin Middle Ages*, tr. Willard Trask (New York: Harper, 1963), pp. 319 ff.
41. See Wolfe, *Son of the Wilderness*, p. 76.
42. Cited in Curtius, p. 323.
43. Wolfe, *Journals*, p. 88.
44. Badè, I. 314-15.
45. Badè, I. 21.



"In the Wilderness is the preservation of the world."

Henry David Thoreau

"In God's wildness lies the hope of the world."
John Muir

