On clear cold winter mornings in the Central Valley of California, you can look west to the rolling outline of the Coast Ranges, east to the snow-covered crest of the Sierra Nevada. It is roughly one hundred miles from the valley floor to the closest Sierran summits; at this distance, the mighty mountains stand low against the skyline.

It was a view much like this that inspired the naming of the Sierra. The de Anza expedition of Spanish soldiers, settlers, and friars that plodded north from Mexico into the “wilds” of central California in 1776 included a Franciscan missionary, Pedro Font. While exploring a hill in the San Francisco inner bay region one April morning, Font looked off to the northeast. “We saw an immense treeless plain,” he wrote in his diary; “... at the opposite end of this extensive plain, about forty leagues off, we saw a great snow-covered range [una gran sierra nevada], which seemed to me to run from south-southeast to north-northwest.”

On his map, in a location east of the wide plain, Font sketched in the contours of a long jagged range and drew at its crest overlapping cumulus clouds terminating in peaks. Adjacent he printed the words SIERRA NEVADA— the first named and mapped record of this singular North American range.
The Sierra Nevada is the middle range of three nearly parallel major mountain barriers that extend roughly north-south in the western United States. A thousand miles to the east rise the Rocky Mountains, which are separated from the Sierra’s eastern flanks by the Great Basin desert—an arid, desolate land whitened by salt-encrusted lakes, interspersed with sharp-peaked mountains whose lower slopes harbor
spotty forests of pinyon pine and juniper. In the opposite direction, approximately 180 miles west of the Sierra Nevada summits, the Coast Ranges fringe the Pacific Ocean. Between Coast and Sierra lies the Central Valley of California, most of it less than 100 feet above sea level. Originally an arid semigrassland, the valley is today a fertile farming and fruit-growing beneficiary of Sierran waters.

To the north the Sierra Nevada merges with the Cascade Range just south of Lassen National Park, continuing the middle mountain barrier. The two ranges are similar in vegetation at their border, but show their different geological origins increasingly as they spread apart: the volcanic Cascades extend northward to form the picturesque cones of Mounts Rainier, Hood, Adams, and Jefferson in Oregon and Washington, while the predominantly granitic Sierra Nevada stretches southward along the eastern California border to culminate in one of the boldest mountain escarpments in the world. Farther to the south, the Sierra Nevada bends in to meet the Coast Ranges near Tehachapi Pass.

The Cascades and the Rockies are more extensive mountain chains, cut up into many separate ranges. The Sierra Nevada stands alone as the longest, highest single-block mountain range in the United States. It is slightly over 400 miles long and 50 to 80 miles wide. Pushed up as a single tilted block of rock from a “hinge” in the Central Valley, it slopes gently on the west, steeply on the east. From heights of 9,000 feet in the north, its peaks rise to 13,000 feet in the central region and to the 14,495-foot climax of Mount Whitney in the southern Sierra. Around Whitney, twelve peaks of more than 14,000 feet pierce the sky, some of them dropping off precipitously nearly two miles to the Great Basin desert below.

This great eastern escarpment ranks as one of the awesome geological features of its kind in the world, a two-mile-high wall formed primarily by a monumental uplift of the Sierran block along a fault in the earth’s crust. Sierran geologist François Matthes has recounted that “Albrecht Penck, the dean of European geomorphologists, upon viewing this stupendous mountain front, was visibly affected by its grandeur and begged his guide to leave him for several hours that he might contemplate and study it in solitude.”

The Sierra Nevada in its present form is a young range. Along with
the Rocky Mountains and Cascades, the Alps and Himalayas, it rose to its current heights in the Tertiary mountain building, 2 million to 25 million years ago. Its geologically new sawtoothed profiles contrast sharply with the rounded, worn-down contours of more ancient chains such as the Appalachians of the eastern United States, which are more than 250 million years old.

Many of the range's most striking features owe their character to the Pleistocene glaciers that blanketed the subalpine heights and flowed down the river canyons, sculpturing cliffs, spires, and domes, turning broad river valleys into deep-cut U-shaped valleys with leaping waterfalls, and pocketing the high country with numberless little rock-bound lakes, or tarns. The plants and animals that came to thrive in this unique complex of soil, rock, climate, and topography show a diversity unusual in temperate-zone coniferous forests. Along with the variety emerged a magnetic beauty.

Neither of these was lost on John Muir. From the day in 1868 when the young Scottish naturalist walked into the Sierra Nevada until his death in 1914, he sang the praises of the range. From its tawny foothills through its pine and fir forests to timberline, from its cone-dropping tree squirrels to black bears met as fellow berry-pickers at brambles, the Sierra was for him a radiant, unpredictable, lively world. As he swung in a Douglas fir at the height of a mountain storm, as he slid down into Yosemite Valley on a snow avalanche, as he listened to the song of the dipper on a wild winter morning, as he lay in a mountain meadow watching bees pollinate flowers, Muir felt the joyous pulse of the mountains: "And after ten years spent in the heart of it, rejoicing and wondering, bathing in its glorious floods of light, seeing the sunbursts of morning among the icy peaks, the noonday radiance on the trees and rocks and snow, the flush of the alpenglow, and a thousand dashing waterfalls with their marvelous abundance of irised spray, it still seems to me above all others the Range of Light, the most divinely beautiful of all the mountain-chains I have ever seen."3

Muir's writings unveiled the range to the world. His militant fight to preserve its natural beauty was a major influence in the critical period around the turn of the century, when national parks and forest
reserves were new ideas that hung by tenuous threads. The Sierra Club, which Muir helped found in 1892, has kept a vigilant eye on trespass of the range’s treasures ever since.

Today’s Sierra Nevada contains three national parks (Yosemite, Sequoia, and Kings Canyon), one national monument (Devil’s Postpile), nine national forests, and numerous state parks. The high southern Sierra above 8,000 feet is a vast panoramic wilderness, the roadless haven of summer backpackers and family burro parties. Lower, easier passes broach the northern and central crest, following trails earlier trod by Indians and pioneers, now crossed by highways. A trip up and over these cross-mountain roads from June through October unfolds in a succession of changing scenes, different on each pass but similar in the plant belts appearing at equivalent levels.

All high mountains of the world have plant belts, or “life zones,” that vary with elevation. The zones are actually intricate communities of plants and animals that live at altitudes where temperature, moisture, soil, slope, and other environmental conditions meet their needs—and where circumstances of history and evolution have put them. In the Sierra all but the highest communities are accessible by road.

For a close look at the wildlife communities of the range, we shall climb up and over: up the western slope through foothill woodlands of gray pine and oak and thickets of chaparral, into the midmountain forests of ponderosa and sugar pine and groves of giant sequoias, higher still through red firs and lodgepole pines to subalpine forests that lead to timberline, beyond trees to alpine crests, and then down the steep east side into a land mightily different from the one where we began.