may be set down to the not yet closed account of reconstruction. This, too, was a crime which in old times was not known in the South.

Among the better signs is the increasing feeling that it is best, on the whole, to leave every section to work out its own problems. Many years ago Mr. Seward said of the negro race: "They will find their place; they must take their level. The laws of political economy will determine their position and the relation of the two races. Congress cannot contravene those."

Congress attempted to contravene them; but though for a brief period it appeared to have succeeded, the lapse of time has shown its failure. It might as well have attempted to contravene the law of gravitation.

That intelligence, virtue, and force of character will eventually rule is as certain in the states of the South as it is elsewhere; and everywhere it is as certain as the operation of the law of gravitation. Whatever people wish to rule in those states must possess these qualities.

Thomas Nelson Page.

HUNTING BIG REDWOODS.

The Big Tree (Sequoia gigantea) is nature’s forest masterpiece, and, as far as I know, the greatest of living things. It belongs to an ancient stock, as its remains in old rocks show, and has a strange air of other days about it, a thoroughbred look inherited from the long ago, the auld lang syne of trees. Once the genus was common, and with many species flourished in the now desolate Arctic regions, the interior of North America, and in Europe; but in long eventful wanderings from climate to climate only two species have survived the hardships they had to encounter, the gigantea and sempervirens: the former now restricted to the western slopes of the Sierra, the other to the Coast Mountains, and both to California, excepting a few groves of redwood which extend into Oregon. The Pacific coast in general is the paradise of conifers. Here nearly all of them are giants, and display a beauty and magnificence unknown elsewhere. The climate is mild, the ground never freezes, and moisture and sunshine abound all the year. Nevertheless, it is not easy to account for the colossal size of the Séquoias. The largest are about three hundred feet high, and thirty feet in diameter. Who of all the dwellers of the plains and prairies and fertile home forests of round-headed oak and maple, hickory and elm, ever dreamed that earth could bear such growths? — trees that the familiar pines and firs seem to know nothing about, lonely, silent, serene, with a physiognomy almost godlike, and so old, thousands of them still living had already counted their years by tens of centuries when Columbus set sail from Spain, and were in the vigor of youth or middle age when the star led the Chaldean sages to the infant Saviour’s cradle. As far as man is concerned, they are the same yesterday, to-day, and forever, emblems of permanence.

No description can give any adequate idea of their singular majesty, much less of their beauty. Excepting the sugar pine, most of its neighbors with pointed tops seem to be forever shouting "Excelsior!" while the Big Tree, though soaring above them all, seems satisfied, its rounded head poised lightly as a cloud, giving no impression of trying to go higher. Only in youth does it show, like other conifers, a heavenward yearning, keenly aspiring with a long quick-grow
ing top. Indeed, the whole tree, for the first century or two, or until a hundred to a hundred and fifty feet high, is arrowhead in form, and, compared with the solemn rigidity of age, is as sensitive to the wind as a squirrel tail. The lower branches are gradually dropped, as it grows older, and the upper ones thinned out, until comparatively few are left. These, however, are developed to great size, divide again and again, and terminate in bossy rounded masses of leafy branchlets, while the head becomes domeshaped. Then, poised in fullness of strength and beauty, stern and solemn in mien, it glows with eager, enthusiastic life, quivering to the tip of every leaf and branch and far-reaching root, calm as a granite dome, — the first to feel the touch of the rosy beams of the morning, the last to bid the sun good-night.

Perfect specimens, unhurt by running fires or lightning, are singularly regular and symmetrical in general form, though not at all conventional, showing infinite variety in sure unity and harmony of plan. The immensely strong, stately shafts, with rich purplish-brown bark, are free of limbs for a hundred and fifty feet or so, though dense tufts of sprays occur here and there, producing an ornamental effect, while long parallel furrows give a fluted, columnar appearance. The limbs shoot forth with equal boldness in every direction, showing no weather side. On the old trees the main branches are crooked and rugged, and strike rigidly outward, mostly at right angles from the trunk, but there is always a certain measured restraint in their reach which keeps them within bounds. No other Sierra tree has foliage so densely massed, or outlines so finely, firmly drawn, and so obediently subordinate to an ideal type. A particularly knotty, angular, ungovernable-looking branch, five to eight feet in diameter, and perhaps a thousand years old, may occasionally be seen pushing out from the trunk, as if determined to break across the bounds of the regular curve; but, like all the others, as soon as the general outline is approached, the huge limb dissolves into massy bosses of branchlets and sprays, as if the tree were growing beneath an invisible bell glass, against the sides of which the branches were moulded, while many small varied departures from the ideal form give the impression of freedom to grow as they like.

Except in picturesque old age, after being struck by lightning and broken by a thousand snowstorms, this regularity of form is one of the Big Tree's most distinguishing characteristics. Another is the simple sculptural beauty of the trunk, and its great thickness as compared with its height and the width of the branches; many of them being from eight to ten feet in diameter at a height of two hundred feet from the ground, and seeming more like finely modeled and sculptured architectural columns than the stems of trees, while the great strong limbs are like rafters supporting the magnificent dome head.

The root system corresponds in magnitude with the other dimensions of the tree, forming a flat, far-reaching, spongy network, two hundred feet or more in width, without any taproot; and the instep is so grand and fine, so suggestive of endless strength, it is long ere the eye is released to look above it. The natural swell of the roots, though at first sight excessive, gives rise to buttresses no greater than are required for beauty as well as strength, as at once appears when you stand back far enough to see the whole tree in its true proportions. The fineness of the taper of the trunk is shown by its thickness at great heights, — a diameter of ten feet at a height of two hundred being, as we have seen, not uncommon. Indeed, the boles of but few trees hold their thickness so well as Sequoia. Resolute, consummate, determined in form, always beheld with wondering admiration, the Big Tree always
seems unfamiliar, standing alone, unrelated, with peculiar physiognomy, awfully solemn and earnest. Nevertheless, there is nothing alien in its looks. The madroña, clad in thin smooth red and yellow bark and big glossy leaves, seems, in the dark coniferous forests of Washington and Vancouver Island, like some lost wanderer from the magnolia groves of the South, while Sequoia, with all its strangeness, seems more at home than any of its neighbors, holding the best right to the ground as the oldest, strongest inhabitant. One soon becomes acquainted with new species of pine and fir and spruce as with friendly people, shaking their outstretched branches like shaking hands, and fondling their beautiful little ones; while the venerable aboriginal Sequoia, ancient of other days, keeps you at a distance, taking no notice of you, speaking only to the winds, thinking only of the sky, looking as strange in aspect and behavior among the neighboring trees as would the mastodon or hairy elephant among the homely bears and deer. Only the Sierra juniper is at all like it, standing rigid and unconquerable on glacial pavements for thousands of years, grim, rusty, silent, uncommunicative, with an air of antiquity about as pronounced as that so characteristic of Sequoia.

The bark of full-grown trees is from one to two feet thick, rich cinnamon-brown, purplish on young trees and shady parts of the old, forming magnificent masses of color with the underbrush and beds of flowers. Toward the end of winter the trees themselves bloom, while the snow is still eight or ten feet deep. The pistillate flowers are about three eighths of an inch long, pale green, and grow in countless thousands on the ends of the sprays. The staminate are still more abundant, pale yellow, a fourth of an inch long, and when the golden pollen is ripe they color the whole tree, and dust the air and the ground far and near.

The cones are bright grass-green in color, about two and a half inches long, one and a half wide, and are made up of thirty or forty strong closely packed rhomboidal scales, with four to eight seeds at the base of each. The seeds are extremely small and light, being only from an eighth to a fourth of an inch long and wide, including a filmy surrounding wing, which causes them to glint and waver in falling, and enables the wind to carry them considerable distances from the tree.

The faint lisp of snowflakes, as they alight, is one of the smallest sounds mortal can hear. The sound of falling Sequoia seeds, even when they happen to strike on flat leaves or flakes of bark, is about as faint. Very different are the bumping and thudding of the falling cones. Most of them are cut off by the Douglas squirrel, and stored for the sake of the seeds, small as they are. In the calm Indian summer these busy harvesters with ivory sickles go to work early in the morning, as soon as breakfast is over, and nearly all day the ripe cones fall in a steady pattering, bumping shower. Unless harvested in this way, they discharge their seeds, and remain on the tree for many years. In fruitful seasons the trees are fairly laden. On two small specimen branches, one and a half and two inches in diameter, I counted four hundred and eighty cones. No other California conifer produces nearly so many seeds, excepting perhaps its relative, the redwood of the Coast Mountains. Millions are ripened annually by a single tree, and the product of one of the main groves in a fruitful year would suffice to plant all the mountain ranges of the world.

The dense tufted sprays make snug nesting places for birds, and in some of the loftiest, leafiest towers of verdure thousands of generations have been reared, the great solemn trees shedding off flocks of merry singers every year from nests like the flocks of winged seeds from the cones.
The Big Tree keeps its youth far longer than any of its neighbors. Most silver firs are old in their second or third century, pines in their fourth or fifth, while the Big Tree, growing beside them, is still in the bloom of its youth, juvenile in every feature, at the age of old pines, and cannot be said to attain anything like prime size and beauty before its fifteen hundredth year, or, under favorable circumstances, become old before its three thousandth. Many, no doubt, are much older than this. On one of the Kings River giants, thirty-five feet and eight inches in diameter, exclusive of bark, I counted upwards of four thousand annual wood rings, in which there was no trace of decay after all these centuries of mountain weather. There is no absolute limit to the existence of any tree. Their death is due to accidents, not, as of animals, to the wearing out of organs. Only the leaves die of old age,—their fall is foretold in their structure; but the leaves are renewed every year, and so also are the other essential organs, wood, roots, bark, buds. Most of the Sierra trees die of disease. Thus the magnificent silver firs are devoured by fungi, and comparatively few of them live to see their three hundredth birth year. But nothing hurts the Big Tree. I never saw one that was sick or showed the slightest sign of decay. It lives on through indefinite thousands of years, until burned, blown down, undermined, or shattered by some tremendous lightning stroke. No ordinary bolt ever seriously hurts Sequoia. In all my walks I have seen only one that was thus killed outright. Lightning, though rare in the California lowlands, is common on the Sierra. Almost every day in June and July small thunderstorms refresh the main forest belt. Clouds like snowy mountains of marvelous beauty grow rapidly in the calm sky about midday, and cast cooling shadows and showers that seldom last more than an hour. Nevertheless, these brief, kind storms wound or kill a good many trees. I have seen silver firs, two hundred feet high, split into long peeled rails and slivers down to the roots, leaving not even a stump; the rails radiating like the spokes of a wheel from a hole in the ground where the tree stood. But the Sequoia, instead of being split and slivered, usually has forty or fifty feet of its brash knotty top smashed off in short chunks about the size of cord wood, the beautiful rosy-red ruins covering the ground in a circle a hundred feet wide or more. I never saw any that had been cut down to the ground, or even to below the branches, except one in the Stanislaus Grove, about twelve feet in diameter, the greater part of which was smashed to fragments, leaving only a leafless stump about seventy-five feet high. It is a curious fact that all the very old Sequoias have lost their heads by lightning. "All things come to him who waits;" but of all living things Sequoia is perhaps the only one able to wait long enough to make sure of being struck by lightning. Thousands of years it stands ready and waiting, offering its head to every passing cloud as if inviting its fate, praying for heaven's fire as a blessing; and when at last the old head is off, another of the same shape immediately begins to grow on. Every bud and branch seems excited, like bees that have lost their queen, and tries hard to repair the damage. Branches that for many centuries have been growing out horizontally at once turn upward, and all their branchlets arrange themselves with reference to a new top of the same peculiar curve as the old one. Even the small subordinate branches halfway down the trunk do their best to push up to the top and help in this curious head-making.

The great age of these noble trees is even more wonderful than their huge size, standing bravely up, millennium in, millennium out, to all that fortune may bring them; triumphant over tempest and fire and time, fruitful and beautiful, giving food and shelter to multitudes of
small fleeting creatures dependent upon their bounty. Other trees may claim to be about as large or as old: Australian gums, Senegal baobabs, Mexican taxodi-ums, English yews, and venerable Lebanon cedars, trees of renown, some of which are from ten to thirty feet in diameter. We read of oaks that are supposed to have existed ever since the creation, yet, strange to say, I can find no definite accounts of the age of any of these trees, but only estimates based on tradition and assumed average rates of growth. No other known tree approaches the Sequoia in grandeur, height and thickness being considered, and none, as far as I know, has looked down on so many centuries, or opens such impressive and suggestive views into history. The majestic monument of the Kings River Forest is, as we have seen, fully four thousand years old, and, measuring the rings of annual growth, we find it was no less than twenty-seven feet in diameter at the beginning of the Christian era, while many observations lead me to expect the discovery of others ten or twenty centuries older. As to those of moderate age, there are thousands, mere youths as yet, that

"saw the light that shone
On Mahomed's uplifted crescent,
On many a royal gilded throne
And deed forgotten in the present,
... saw the age of sacred trees
And Druid groves and mystic larches,
And saw from forest domes like these
The builder bring his Gothic arches."

Great trees and groves need to be venerated as sacred monuments and halls of council and worship. But soon after the discovery of the Calaveras Grove one of the grandest trees was cut down for the sake of the stump! The laborious vandals had seen "the biggest tree in the world;" then, forsooth, they must try to see the biggest stump and dance on it.

The growth in height for the first two centuries is usually at the rate of eight to ten inches a year. Of course all very large trees are old, but those equal in size may vary greatly in age, on account of variations in soil, closeness or openness of growth, etc. Thus, a tree about ten feet in diameter that grew on the side of a meadow was, according to my own count of the wood rings, only two hundred and fifty-nine years old at the time it was felled, while another in the same grove, of almost exactly the same size, but less favorably situated, was fourteen hundred and forty years old. The Calaveras tree cut for a dance floor was twenty-four feet in diameter, and only thirteen hundred years old; another, about the same size, was a thousand years older.

One of my own best excursions among the Sequoias was made in the autumn of 1875, when I explored the then unknown or little-known Sequoia region south of the Mariposa Grove for comprehensive views of the belt, and to learn what I could of the peculiar distribution of the species and its history in general. In particular, I was anxious to try to find out whether it had ever been more widely distributed since the glacial period; what conditions, favorable or otherwise, were affecting it; what were its relations to climate, topography, soil, and the other trees growing with it, etc.; and whether, as was generally supposed, the species was nearing extinction. I was already acquainted in a general way with the northern groves, but, excepting some passing glimpses gained on excursions into the high Sierra about the head waters of Kings and Kern rivers, I had seen nothing of the south end of the belt.

Nearly all my mountaineering has been done on foot, carrying as little as possible, depending on camp fires for warmth, that so I might be light and free to go wherever my studies might lead. But on this Sequoia trip, which promised to be long, I was persuaded to take a small wild mule with me, to carry provisions and a pair of blankets. The friendly owner of the animal, having no-
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I tied that I sometimes looked tired when I came down from the peaks to replenish my bread sack, assured me that his "little Brownie mule" was just what I wanted, — tough as a knot, perfectly untirable, low and narrow, just right for squeezing through brush, able to climb like a chipmunk, jump from boulder to boulder like a wild sheep, and go anywhere a man could go. But tough as he was, and accomplished as a climber, many a time in the course of our journey, when he was jaded and hungry, wedged fast in rocks or struggling in chaparral like a fly in a spider web, his troubles were sad to see, and I wished he would leave me and find his way home alone.

We set out from Yosemite about the end of August, and our first camp was made in the well-known Mariposa Grove. Here and in the adjacent pine woods I spent nearly a week, carefully examining the boundaries of the grove for traces of its greater extension without finding any. Then I struck out into the majestic trackless forest to the southeastward, hoping to find new groves or traces of old ones in the dense silver fir and pine woods about the head of Big Creek, where soil and climate seemed most favorable to their growth; but not a single tree or old monument of any sort came to light until I climbed the high rock called Wamellow by the Indians. Here I obtained telling views of the fertile forest-filled basin of the upper Fresno. Innumerable spires of the noble yellow pine were displayed rising one above another on the braided slopes, and yet nobler sugar pines with superb arms outstretched in the rich autumn light, while away toward the southwest, on the verge of the glowing horizon, I discovered the majestic domelike crowns of Big Trees towering high over all, singly and in close grove congregations. There is something wonderfully attractive in this king tree, even when beheld from afar, that draws us to it with indescribable enthusiasm, — its superior height and massive smoothly rounded outlines proclaiming its character in any company; and when one of the oldest of them attains full stature on some commanding ridge, it seems the very god of the woods. I ran back to camp, packed Brownie, and steered over the divide and down into the heart of the Fresno Grove. Then choosing a camp on the side of a brook where the grass was good, I made a cup of tea, and set off free among the brown giants, glorying in the abundance of new work about me. One of the first special things that caught my attention was an extensive landslip. The ground on the side of a stream had given way to a depth of about fifty feet, and with all its trees had been launched into the bottom of the stream ravine. Most of the trees — pines, firs, incense cedar, and Sequoia — were still standing erect and uninjured, as if unconscious that anything out of the common had happened. Tracing the ravine alongside the avalanche, I saw many trees whose roots had been laid bare, and in one instance discovered a Sequoia, about fifteen feet in diameter, growing above an old prostrate trunk that seemed to belong to a former generation. This slip had occurred seven or eight years ago, and I was glad to find not only that most of the Big Trees were uninjured, but that many companies of hopeful seedlings and saplings were growing confidently on the fresh soil along the broken front of the avalanche. These young trees were already eight or ten feet high, and were shooting up vigorously, as if sure of eternal life, though young pines, firs, and libocedrus were running a race with them for the sunshine, with an even start. Farther down the ravine I counted five hundred and thirty-six promising young Sequoias on a bed of rough bouldery soil not exceeding two acres in extent.

The Fresno Big Trees covered an area of about four square miles, and while wandering about, surveying the bounda-
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ries of the grove, anxious to see every tree, I came suddenly upon a handsome log cabin, richly embowered, and so fresh and unweathered it was still redolent of gum and balsam, like a newly felled tree. Strolling forward, wondering who could have built it, I found an old, wearily-eyed, unspeculative, gray-haired man on a bark stool by the door, reading a book. The discovery of his hermitage by a stranger seemed to surprise him; but when I explained that I was only a tree lover sauntering along the mountains to study Sequoia, he bade me welcome, and made me bring my mule down to a little slanting meadow before his door and camp with him, promising to show me his pet trees and many curious things bearing on my studies.

After supper, as the evening shadows were falling, the good hermit sketched his life in the mines, which, in the main, was like that of most other pioneer gold hunters, — a succession of intense experiences, full of big ups and downs, like the mountain topography. Since “'49” he had wandered over most of the Sierra, sinking innumerable prospect holes like a sailor making soundings, digging new channels for streams, sifting gold-sprinkled boulder and gravel beds with unquenchable energy, — life’s noon, the meanwhile, passing unnoticed into late afternoon shadows. Then, health and gold gone, the game played and lost, like a wounded deer creeping into this forest solitude, he awaits the sundown call. How sad the undertones of many a life here, now the noise of the first big gold battles has died away! How many of the undertones of many a life here, now the noise of the first big gold battles has died away! How many interesting wrecks lie drifted and stranded in hidden nooks of the gold region! Perhaps no other range contains the remains of so many rare and interesting men. The name of my hermit friend is John A. Nelder, a fine, kind man, who in going into the woods has at last gone home; for he loves nature truly, and realizes that these last shadowy days, with scarce a glint of gold in them, are the best of all. Birds, squirrels, plants, get loving natural recognition, and delightful it was to see how sensitively he responded to the silent influences of the woods. His eyes brightened as he gazed on the trees that stand guard around his little home; squirrels and mountain quails came at his call to be fed; and he tenderly stroked the little snow-bent sapling Sequoias, hoping they might yet grow straight to the sky and rule the grove. One of the greatest of his trees stands a little way back of his cabin, and he proudly led me to it, bidding me admire its colossal proportions and measure it, to see if in all the forest there could be another so grand. It proved to be only twenty-six feet in diameter, and he seemed distressed to learn that the Mariposa Grizzly Giant was larger. I tried to comfort him by observing that his was the taller, finer formed, and perhaps the more favorably situated. Then he led me to some noble ruins, remnants of gigantic trunks of trees that he supposed must have been larger than any now standing; and though they had lain on the damp ground, exposed to fire and the weather for centuries, the wood was perfectly sound. Sequoia timber is not only beautiful in color, — rose-red when fresh, and as easily worked as pine, — but it is almost absolutely unperishable. Build a house of Big Tree logs on granite, and that house will last about as long as its foundation. Indeed, fire seems to be the only agent that has any appreciable effect on it. From one of these ancient trunk remnants I cut a specimen of the wood, which neither in color, strength, nor soundness could be distinguished from specimens cut from living trees, although it had certainly lain on the damp forest floor for more than three hundred and eighty years; probably more than thrice as long. The time in this instance was determined as follows: when the tree from which the specimen was derived fell, it sunk itself into the ground, making a ditch about
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two hundred feet long and five or six feet deep; and in the middle of this ditch, where a part of the fallen trunk had been burned out of the way, a silver fir, four feet in diameter and three hundred and eighty years old, was growing; showing that the Sequoia trunk had lain on the ground three hundred and eighty years plus the unknown time that it lay before the part whose place had been taken by the fir was burned out of the way, and that which had elapsed ere the seed from which the monumental fir sprang fell into the prepared soil and took root. Now, because Sequoia trunks are never wholly consumed in one forest fire, and these fires recur only at considerable intervals, and because Sequoia ditches, after being cleared, are often left unplanted for centuries, it becomes evident that the trunk remnant in question may have been on the ground a thousand years or more. Similar vestiges are common, and, together with the root bowls and long straight ditches of the fallen monarchs, throw a sure light back on the postglacial history of the species, bearing on its distribution. One of the most interesting features of this grove is the apparent ease and strength and comfortable independence in which the trees occupy their place in the general forest. Seedlings, saplings, young and middle-aged trees, are grouped promisingly around the old patriarchs, betraying no sign of approach to extinction. On the contrary, all seem to be saying, "Everything is to our mind, and we mean to live forever." But, sad to tell, a lumber company was building a large mill and flume near by, assuring widespread destruction.

Day after day, from grove to grove, cañon to cañon, I made a long wavering way; terribly rough in some places for Brownie, but cheery for me, for Sequoias were seldom out of sight. We crossed the rugged, picturesque basins of Redwood Creek, the North Fork of the Kaweah, and Marble Fork, gloriously forested, and full of beautiful cascades and falls, sheer and slanting, infinitely varied with broad curly foam fleeces and strips of embroidery in which the sunbeams revel. Thence we climbed into the noble forest on the Marble and Middle Fork divide. After a general exploration of the Kaweah basin this part of the Sequoia belt seemed to me the finest, and I then named it the Giant Forest. It extends, a magnificent growth of giants, grouped in pure temple groves, ranged in colonnades along the sides of meadows, or scattered among the other trees, from the granite headlands overlooking the hot foothills and plains of the San Joaquin back to within a few miles of the old glacier fountains, at an elevation of five thousand to eight thousand four hundred feet above the sea.

When I entered this sublime wilderness the day was nearly done; the trees, with rosy glowing countenances, seemed to be hushed and thoughtful, as if waiting in conscious religious dependence on the sun, and one naturally walked softly and awestricken among them. I wandered on, meeting nobler trees where all are noble, subdued in the general calm, as if in some vast hall pervaded by the deepest sanctities and solemnities that sway human souls. At sundown the trees seemed to cease their worship and breathe free. I heard the birds going home. I too sought a home for the night on the edge of a level meadow, where there is a long open view between the evenly ranked trees standing guard along its sides. Then, after a good place was found for poor Brownie, who had had a hard, weary day, sliding and scrambling across the Marble cañon, I made my bed and supper, and lay on my back, looking up to the stars through pillared arches finer far than the pious heart of man telling its love ever reared. Then I took a walk up the meadow to see the trees in the pale light. They seemed still more marvelously massive and tall than by day, heaving their colossal heads into
the depths of the sky among the stars, some of which seemed to be sparkling on their branches like flowers. I built a big fire, that vividly illumined the huge brown boles of the nearest trees, and the little plants and cones and fallen leaves at their feet; keeping up the show until I fell asleep to dream of boundless forests and trail-building for Brownie.

Joyous birds welcomed the dawn, and the squirrels, now their food cones were ripe, and had to be quickly gathered and stored for winter, began their work before sunrise. My tea-and-bread-crumble breakfast was soon done, and leaving jaded Brownie to feed and rest, I sauntered forth to my studies. In every direction Sequoia ruled the woods. Most of the other big conifers were present here and there, but not as rivals or companions. They only served to thicken and enrich the general wilderness. Trees of every age cover craggy ridges as well as the deep moraine-soiled slopes, and plant their magnificent shafts along every brookside and meadow. Bogs and meadows are rare or entirely awanting in the isolated groves north of Kings River; here there is a beautiful series of them lying on the broad top of the main dividing ridge, imbedded in the very heart of the mammoth woods, as if for ornament, their smooth plushy bosoms kept bright and fertile by streams and sunshine.

Resting awhile on one of the most beautiful of them, when the sun was high, it seemed impossible that any other forest picture in the world could rival it. There lay the grassy, flowery lawn, three fourths of a mile long, smoothly outspread, basking in mellow autumn light, colored brown and yellow and purple, streaked with lines of green along the streams, and ruffled here and there with patches of leduc and scarlet vaccinium. Around the margin there is first a fringe of azalea and willow bushes, colored orange-yellow and enlivened with vivid dashes of red cornel, as if painted. Then up spring the mighty walls of verdure, three hundred feet high, the brown fluted pillars so thick and tall and strong they seem fit to uphold the sky; the dense foliage, swelling forward in rounded bosses on the upper half, variously shaded and tinted,—that of the young trees dark green, of the old yellowish. An aged lightning-smitten patriarch, standing a little forward beyond the general line, with knotty arms outspread, was covered with gray and yellow lichens, and surrounded by a group of saplings whose slender spires seemed to lack not a single leaf or spray in their wondrous perfection.

Such was the Kaweah meadow picture that golden afternoon; and as I gazed every color seemed to deepen and glow, as if the progress of the fresh sun work were visible from hour to hour, while every tree seemed religious and conscious of the presence of God. A freeman revels in a scene like this, and time goes by unmeasured. I stood fixed in silent wonder, or sauntered about, shifting my points of view, studying the physiognomy of separate trees, and going out to the different color patches to see how they were put on and what they were made of; giving free expression to my joy, exulting in nature’s wild immortal vigor and beauty, never dreaming any other human being was near. Suddenly the spell was broken by dull bumping, thudding sounds, and a man and horse came in sight at the farther end of the meadow, where they seemed sadly out of place. A good big bear or mastodon or megatherium would have been more in keeping with the old mammoth forest. Nevertheless, it is always pleasant to meet one of our own species, after solitary rambles, and I stepped out where I could be seen and shouted, when the rider reined in his galloping mustang and waited my approach. He seemed too much surprised to speak, until, laughing in his puzzled face, I said I was glad to meet a fellow mountaineer in so lonely a place. Then he abruptly asked: "What are you do-
ing? How did you get here?” I explained that I came across the canons from Yosemite, and was only looking at the trees. “Oh, then I know,” he said, greatly to my surprise. “You must be John Muir.” He was herding a band of horses that had been driven up a rough trail from the lowlands to feed on these forest meadows. A few handfuls of crumb detritus was all that was left in my bread sack, so I told him that I was nearly out of provisions, and asked whether he could spare me a little flour. “Oh yes, of course you can have anything I’ve got,” he said. “Just take my track, and it will lead you to my camp in a big hollow log on the side of a meadow two or three miles from here. I must ride after some strayed horses, but I’ll be back before night; in the meantime make yourself at home.”

He galloped away to the northward. I returned to my own camp, saddled Brownie, and by the middle of the afternoon discovered his noble den in a fallen Sequoia hollowed by fire, — a spacious log house of one log, carbon-lined, centuries old, yet sweet and fresh, weather-proof, earthquake-proof, likely to outlast the most durable stone castle, and commanding views of garden and grove grander far than the richest king ever enjoyed. Brownie found plenty of grass, and I found bread, which I ate, with views from the big, round, ever open door. Soon the Good Samaritan mountaineer came in, and I enjoyed a famous rest, listening to his observations on trees, animals, adventures, etc., while he was busy preparing supper. In answer to inquiries concerning the distribution of the Big Trees he gave a good deal of information of the forest we were in, with little in general. He had heard that the species extended a long way south, — he knew not how far.

In the forest between the Middle and East Fork of the Kaweah I met a grand fire; and as fire is the master scourge and controller of the distribution of trees, I stopped to watch it and learn what I could of its works and ways with the giants. It came racing up the steep chaparral-covered slopes of the East Fork canón with passionate enthusiasm in a broad cataract of flames: now bending down low to feed on the green bushes, devouring acres of them at a breath; now towering high in the air, as if looking abroad to choose a way; then stooping to feed again, — the lurid flapping surges and the smoke and terrible rushing and roaring hiding all that is gentle and orderly in the work. But as soon as the deep forest was reached the ungovernable flood became calm, like a torrent entering a lake; creeping and spreading beneath the trees, where the ground was level or sloped gently, slowly nibbling the cake of compressed needles and scales with flames an inch high, rising here and there to a foot or two on dry twigs and clumps of small bushes and brome grass. Only at considerable intervals were fierce bonfires lighted, where heavy branches broken off by snow had accumulated, or around some venerable giant whose head had been stricken off by lightning.

I tethered Brownie on the edge of a little meadow beside a stream, a good safe way off, and then cautiously chose a camp for myself in a big stout hollow trunk, not likely to be crushed by the fall of burning trees, and made a bed of ferns and boughs in it. The night, however, and the strange wild fireworks were too beautiful and exciting to allow much sleep. There was no danger of being chased and hemmed in; for in the main forest belt of the Sierra, even when swift winds are blowing, fires seldom or never sweep over the trees in broad all-embracing sheets, as they do in the dense Rocky Mountain woods and in those of the Cascade Mountains of Oregon and Washington. Here they creep from tree to tree with tranquil deliberation, allowing close observation, though caution is required, in venturing around the burning giants, to avoid falling limbs.
and knots and fragments from dead shattered tops. Though the day was best for study, I sauntered about night after night, learning what I could, and admiring the wonderful show vividly displayed in the lonely darkness: the ground fire advancing in long crooked lines, gently grazing and smoking on the close-pressed leaves, springing up in thousands of little jets of pure flame on dry tassels and twigs, and tall spires and flat sheets with jagged flapping edges dancing here and there on grass tufts and bushes; big bonfires blazing in perfect storms of energy, where heavy branches mixed with small ones lay smashed together in hundred-cord piles; big red arches between spreading root swells and trees growing close together; huge fire-mantled trunks on the hill slopes glowing like bars of hot iron; violet-colored fire running up the tall trees, tracing the furrows of the bark in quick-quivering rills, and lighting magnificent torches on dry shattered tops; and ever and anon, with a tremendous roar and burst of light, young trees clad in low-descending feathery branches vanishing in one flame two or three hundred feet high.

One of the most impressive and beautiful sights was made by the great fallen trunks lying on the hillsides, all red and glowing like colossal iron bars fresh from a furnace; two hundred feet long, some of them, and ten to twenty feet thick. After repeated burnings have consumed the bark and sapwood, the sound charred surface, being full of cracks and sprinkled with leaves, is quickly overspread with a pure rich furred ruby glow, almost flameless and smokeless, producing a marvelous effect in the night. Another grand and interesting sight are the fires on the tops of the largest living trees, flaming above the green branches at a height of perhaps two hundred feet, entirely cut off from the ground fires, and looking like signal beacons on watch towers. From one standpoint I sometimes saw a dozen or more, those in the distance looking like great stars above the forest roof. At first I could not imagine how these Sequoia lamps were lighted, but the very first night, strolling about, waiting and watching, I saw the thing done again and again. The thick fibrous bark of old trees is divided by deep, nearly continuous furrows, the sides of which are bearded with the bristling ends of fibres broken by the growth swelling of the trunk; and when the fire comes creeping around the foot of the tree, it runs up these briskly furrows in lovely pale blue quivering; bickering rills of flame, with a low, earnest, whispering sound, to the lightning-shattered top of the trunk, which, in the dry Indian summer, with perhaps leaves and twigs and squirrel-gnawed cone scales and seed wings lodged on it, is readily ignited. These lamp-lighting rills, the most beautiful fire streams I ever saw, last only a minute or two; but the big lamps burn with varying brightness for days and weeks, throwing off sparks like the spray of a fountain, while ever and anon a shower of red coals comes sifting down through the branches, followed at times, with startling effect, by a big burned-off chunk weighing perhaps half a ton.

The immense bonfire, where fifty or a hundred cords of peeled, split, smashed wood have been piled around some old giant by a single stroke of lightning, is another grand sight in the night. The light was so great I found I could read common print three hundred yards from them, and the illumination of the circle of on-looking trees is indescribably impressive. Other big fires, roaring and booming like waterfalls, were blazing on the upper sides of trees on hill slopes against which limbs broken off by heavy snow had rolled, while branches high overhead, tossed and shaken by the ascending air current, seemed to be writhing in pain. Perhaps the most startling phenomenon of all was the quick death of childlike Sequoias only a cen-
Hunting Big Redwoods.

In the midst of the other comparatively slow and steady fire work, one of these tall beautiful saplings, leafy and branchy, would be seen blazing up suddenly all in one heaving, booming, passionate flame reaching from the ground to the top of the tree, and fifty to a hundred feet or more above it, with a smoke column bending forward and streaming away on the upper free-flowing wind. To burn these green trees, a strong fire of dry wood beneath them is required to send up a current of air hot enough to distill inflammable gases from the leaves and sprays; then, instead of the lower limbs gradually catching fire and igniting the next and next in succession, the whole tree seems to explode almost simultaneously, and with awful roaring and throbbing a round tapering flame shoots up two or three hundred feet, and in a second or two is quenched, leaving the green spire a black dead mast, bristled and roughened with down-curling boughs. Nearly all the trees that have been burned down are lying with their heads uphill, because they are burned far more deeply on the upper side, on account of broken limbs rolling down against them to make hot fires, while only leaves and twigs accumulate on the lower side, and are quickly consumed without injury to the tree. But green resinless Sequoia wood burns very slowly, and many successive fires are required to burn down a large tree. Fires can run only at intervals of several years, and when the ordinary amount of firewood that has rolled against the gigantic trunk is consumed, only a shallow scar is made, which is slowly deepened by recurring fires until far beyond the centre of gravity; and when at last the tree falls, it of course falls uphill. The healing folds of wood layers on some of the deeply burned trees show that centuries have elapsed since the last wounds were made.

When a great Sequoia falls, its head is smashed into fragments about as small as those made by lightning, and are mostly devoured by the first running hunting fire that finds them, while the trunk is slowly wasted away by centuries of fire and weather. One of the most interesting fire actions on the trunk is the boring of those great tunnel-like hollows through which horsemen may gallop. All of these famous hollows are burned out of the solid wood, for no Sequoia is ever hollowed by decay. When the tree falls, the brash trunk is often broken straight across into sections, as if sawed; into these joints the fire creeps, and, on account of the great size of the broken ends, burns for weeks or even months without being much influenced by the weather. After the great glowing ends fronting each other have burned so far apart that their rims cease to burn, the fire continues to work on in the centres, and the ends become deeply concave. Then, heat being radiated from side to side, the burning goes on in each section of the trunk independent of the other, until the diameter of the bore is so great that the heat radiated across from side to side is not sufficient to keep them burning. It appears, therefore, that only very large trees can receive the fire anger and have any shell rim left.

Of all the Tule basin forest the section on the North Fork seemed the finest, surpassing, I think, even the Giant Forest of the Kaweah. Southward from here, though the width and general continuity of the belt is well sustained, I thought I could detect a slight falling off in the height of the trees and in closeness of growth. All the basin was swept by swarms of hoofed locusts, the southern part over and over again, until not a leaf within reach was left on the wettest bogs, the outer edges of the thorniest chaparral beds, or even on the young conifers, which, unless under the stress of dire famine, sheep never touch. Of course Brownie suffered, though I made diligent search for grassy sheep-proof spots. When I turned him
loose one evening on the side of a carex bog, he dolefully prospected the desolate neighborhood without finding anything that even a starving mule could eat. Then, utterly discouraged, he stole up behind me while I was bent over on my knees making a fire for tea, and in a pitiful mixture of bray and neigh begged for help. It was a mighty touching prayer, and I answered it as well as I could with half of what was left of a cake made from the last of the flour given me by the Indians; hastily passing it over my shoulder, and saying: "Yes, poor fellow, I know, but soon you'll have plenty. To-morrow down we go to alfalfa and barley," — speaking to him as if he were human, as through stress of trouble plainly he was. After eating his portion of bread he seemed content, for he said no more, but patiently turned away to gnaw leafless ceanothus stubs. Such clinging, confiding dependence, after all our scrambles and adventures together, was very touching, and I felt conscience-stricken for having led him so far in so rough and desolate a country. "Man," says Lord Bacon, "is the god of the dog." So also he is of the mule and many other dependent fellow mortals.

Next morning I turned westward, determined to force a way straight to pasture, letting Sequoia wait. Fortunately, ere we had struggled down through half a mile of chaparral we heard a mill whistle, for which we gladly made a bee line. At the sawmill we both got a good meal; then, taking the dusty lumber road, pursued our way to the lowlands. The nearest good pasture, I counted, might be thirty or forty miles away. But scarcely had we gone ten when I noticed a little log cabin, a hundred yards or so back from the road, and a tall man, straight as a pine, standing in front of it, observing us as we came plodding down through the dust. Seeing no sign of grass or hay, I was going past without stopping, when he shouted, "Travelin'?" Then, drawing nearer: "Where have you come from? I didn't notice you go up." I replied I had come through the woods from the north, looking at the trees. "Oh, then you must be John Muir. Halt; you're tired; come and rest, and I'll cook for you." Then I explained that I was tracing the Sequoia belt; that on account of sheep my mule was starving, and therefore I must push on to the lowlands. "No, no," he said. "That corral over there is full of hay and grain. Turn your mule into it. I don't own it, but the fellow who does is hauling lumber, and it will be all right. He's a white man. Come and rest. How tired you must be! The Big Trees don't go much farther south, nohow. I know the country up there; have hunted all over it. Come and rest, and let your little doggone rat of a mule rest. How in heavens did you get him across the canions? Roll him, or carry him? He's poor, but he'll get fat; and I'll give you a horse, and go with you up the mountains, and while you're looking at the trees I'll go hunting. It will be a short job, for the end of the Big Trees is not far." Of course I stopped. No true invitation is ever declined. He had been hungry and tired himself many a time in the Rocky Mountains as well as in the Sierra. Now he owned a band of cattle, and lived alone. His cabin was about eight by ten feet; the door at one end, a fireplace at the other, and a bed on one side, fastened to the logs. Leading me in without a word of mean apology, he made me lie down on the bed; then reached under it, brought forth a sack of apples, and advised me to keep "chawing" at them until he got supper ready. Finer, braver hospitality I never found in all this good world, so often called selfish.

Next day, with hearty, easy alacrity, the mountaineer procured horses, prepared and packed provisions, and got everything ready for an early start the following morning. Well mounted, we
pushed rapidly up the South Fork of the river, and soon after noon were among the giants once more. On the divide between the Tule and Deer Creek a central camp was made, and the mountaineer spent his time in deer-hunting, while, with provisions for two or three days, I explored the woods, and, in accordance with what I had been told, soon reached the southern extremity of the belt on the South Fork of Deer Creek. To make sure, I searched the woods a considerable distance south of the last Deer Creek grove, passed over into the basin of the Kern, and climbed several high points commanding extensive views over the sugar-pine woods, without seeing a single Sequoia crown in all the wide expanse to the southward. On the way back to camp, however, I was greatly interested in a grove I discovered on the east side of the Kern River divide, opposite the North Fork of Deer Creek. The height of the pass where the species crossed over is about seven thousand feet, and I heard of still another grove whose waters drain into the upper Kern, opposite the Middle Fork of the Tule. It appears, therefore, that though the Sequoia belt is two hundred and sixty miles long most of the trees are on a section to the southward. A diameter of twenty feet and height of two hundred and seventy-five is perhaps about the average for anything like mature and favorably situated trees. Specimens twenty-five feet in diameter are not rare, and a good many approach a height of three hundred feet. Occasionally one meets a specimen thirty feet in diameter, and rarely one that is larger. The majestic stump on Kings River is the largest I saw and measured on the entire trip. Careful search around the boundaries of the forests and groves and in the gaps of the belt failed to discover any trace of the former existence of the species beyond its present limits. On the contrary, it seems to be slightly extending its boundaries; for the outstanding stragglers, occasionally met a mile or two from the main bodies, are young instead of old monumental trees. Ancient ruins and the ditches and root bowls the big trunks make in falling were found in all the groves, but none outside of them. We may therefore conclude that the area covered by the species has not been diminished during the last eight or ten thousand years, and probably not at all in postglacial times. For admitting that upon those areas supposed to have been once covered by Sequoia every tree may have fallen, and that fire and the weather had left not a vestige of them, many of the ditches made by the fall of the ponderous trunks, weighing five hundred to nearly a thousand tons, and the bowls made by their upturned roots would remain visible for thousands of years after the last remnant of the trees had vanished. Some of these records would doubtless be effaced in a comparatively short time by the inwashing of sediments, but no inconsiderable part of them would remain enduringly engraved on flat ridge tops, almost wholly free from such action.

In the northern groves, the only ones that at first came under the observation of students, there are but few seedlings and young trees to take the places of the old ones. Therefore the species was regarded as doomed to speedy extinction, as being only an expiring remnant, vanquished in the so-called struggle for life, and shoved into its last strongholds in moist glens where conditions are exceptionally favorable. But the majestic continuous forests of the south end of the belt create a very different impression. Here, as we have seen, no tree in the forest is more enduringly established. Nevertheless, it is oftentimes vaguely said that the Sierra climate is drying out, and that this on-coming, constantly
increasing drought will of itself surely extinguish King Sequoia, though sections of wood rings show that there has been no appreciable change of climate during the last forty centuries. Furthermore, that Sequoia can grow and is growing on as dry ground as any of its neighbors or rivals we have seen proved over and over again. "Why, then," it will be asked, "are the Big Tree groves always found on well-watered spots?" Simply because Big Trees give rise to streams. It is a mistake to suppose that the water is the cause of the groves being there. On the contrary, the groves are the cause of the water being there. The roots of this immense tree fill the ground, forming a sponge, which hoards the bounty of the clouds, and sends it forth in clear perennial streams instead of allowing it to rush headlong in short-lived, destructive floods. Evaporation is also checked and the air kept still in the shady Sequoia depths, while thirsty robber winds are shut out.

Since, then, it appears that Sequoia can and does grow on as dry ground as its neighbors, and that the greater moisture found with it is an effect rather than a cause of its presence, the notions as to the former greater extension of the species and its near approach to extinction, based on its supposed dependence on greater moisture, are seen to be erroneous. Indeed, all my observations go to show that in case of prolonged drought the sugar pines and firs would die before Sequoia. Again, if the restricted and irregular distribution of the species be interpreted as the result of the desiccation of the range, then, instead of increasing in individuals toward the south, where the rainfall is less, it should diminish.

If, then, its peculiar distribution has not been governed by superior conditions of soil and moisture, by what has it been governed? Several years before I made this trip, I noticed that the northern groves were located on those parts of the Sierra soil belt that were first laid bare and opened to preemption when the ice sheet began to break up into individual glaciers. And when I was examining the basin of the San Joaquin, and trying to account for the absence of Sequoia where every condition seemed favorable for its growth, it occurred to me that this remarkable gap in the belt is located in the channel of the great ancient glacier of the San Joaquin and Kings River basins which poured its frozen floods to the plain, fed by the snows that fell on more than fifty miles of the summit peaks of the range. Constantly brooding on the question, I next perceived that the great gap in the belt to the northward, forty miles wide, between the Stanislaus and Tuolumne groves, occurs in the channel of the great Stanislaus and Tuolumne glacier, and that the smaller gap between the Merced and Mariposa groves occurs in the channel of the smaller Merced glacier. The wider the ancient glacier, the wider the gap in the Sequoia belt, while the groves and forests attain their greatest development in the Kaweah and Tule River basins; just where, owing to topographical conditions, the region was first cleared and warmed, while protected from the main ice rivers that flowed past to right and left down the Kings and Kern valleys. In general, where the ground on the belt was first cleared of ice, there the Sequoia now is; and where, at the same elevation and time, the ancient glaciers lingered, there the Sequoia is not. What the other conditions may have been which enabled the Sequoia to establish itself upon these oldest and warmest parts of the main soil belt I cannot say. I might venture to state, however, that since the Sequoia forests present a more and more ancient and long-established aspect to the southward, the species was probably distributed from the south toward the close of the glacial period, before the arrival of other trees. About this branch of the
question, however, there is at present much fog, but the general relationship I have pointed out between the distribution of the Big Tree and the ancient glacier system is clear. And when we bear in mind that all the existing forests of the Sierra are growing on comparatively fresh moraine soil, and that the range itself has been recently sculptured and brought to light from beneath the ice mantle of the glacial winter, then many lawless mysteries vanish, and harmonies take their places.

But notwithstanding all the observed phenomena bearing on the postglacial history of this colossal tree point to the conclusion that it never was more widely distributed on the Sierra since the close of the glacial epoch; that its present forests are scarcely past prime, if indeed they have reached prime; that the postglacial day of the species is probably not half done; yet when, from a wider outlook, the vast antiquity of the genus is considered, and its ancient richness in species and individuals,—comparing our Sierra giant and *Sequoia sempervirens* of the coast, the only other living species, with the many fossil species already discovered, and described by Heer and Lesquereux, some of which flourished over large areas around the Arctic Circle, and in Europe and our own territories, during tertiary and cretaceous times,—then indeed it becomes plain that our two surviving species, restricted to narrow belts within the limits of California, are mere remnants of a genus both as to species and individuals, and that they probably are verging to extinction. But the verge of a period beginning in cretaceous times may have a breadth of tens of thousands of years, not to mention the possible existence of conditions calculated to multiply and reextend both species and individuals. No unfavorable change of climate, so far as I can see, no disease, but only fire and the axe and the ravages of flocks and herds threaten the existence of these noblest of God's trees. In nature's keeping they are safe, but through man's agency destruction is making rapid progress, while in the work of protection only a beginning has been made. The Mariposa Grove belongs to and is guarded by the state; the General Grant and Sequoia National Parks, established ten years ago, are efficiently guarded by a troop of cavalry under the direction of the Secretary of the Interior; so also are the small Tuolumne and Merced groves, which are included in the Yosemite National Park; while a few scattered patches and fringes, scarce at all protected, though belonging to the national government, are in the Sierra Forest Reservation.

Perhaps more than half of all the Big Trees have been sold, and are now in the hands of speculators and millmen. Even the beautiful little Calaveras Grove of ninety trees, and so historically interesting from its being the first discovered, is now owned, together with the much larger South or Stanislaus Grove, by a lumber company.

Far the largest and most important section of protected Big Trees is in the grand Sequoia National Park, now easily accessible by stage from Visalia. It contains seven townships, and extends across the whole breadth of the magnificent Kaweah basin. But, large as it is, it should be made much larger. Its natural eastern boundary is the high Sierra, and the northern and southern boundaries the Kings and Kern rivers; thus including the sublime scenery on the head waters of these rivers, and perhaps nine tenths of all the Big Trees in existence. Private claims cut and blotch both of the Sequoia parks as well as all the best of the forests, every one of which the government should gradually extinguish by purchase, as it readily may, for none of these holdings is of much value to the owners. Thus, as far as possible, the grand blunder of selling would be corrected. The value of these
forests in storing and dispensing the bounty of the mountain clouds is infinitely greater than lumber or sheep. To the dwellers of the plain, dependent on irrigation, the Big Tree, leaving all its higher uses out of the count, is a tree of life, a never failing spring, sending living water to the lowlands all through the hot, rainless summer. For every grove cut down a stream is dried up. Therefore all California is crying, "Save the trees of the fountains!" Nor, judging by the signs of the times, is it likely that the cry will cease until the salvation of all that is left of Sequoia gigantea is sure.

John Muir.

His Enemy.

Dr. St. John was traveling down to Hartsdale by the express. A man of world-wide mark, he had also a local following, and wherever he might go, within a day's journey from home, some one was sure to name him as "St. John, the oculist." A stranger, even, might have guessed at his profession from the keen glance, the considered movements, of a man used to meeting emergencies. The doctor's face wore a veil of reserve: friendly to the present, it indicated a guarded past; and the iron-gray hair, the sunken temples, showed, with some likelihood of exactness, how remote a past it had been. On that journey memory gripped him hard. He was retracing twenty-odd years, and wondering how, in all that time, he could have been so sure God would deliver his enemy into his hand. He put it so, not from any belief in God's immediate justice, but because a formulated saying was easily remembered, and stood by him when he scorned to recall the poor old drama which had at once impoverished and enriched him.

In that past, so far removed now that childhood seemed the nearer, he was a young man with a good deal of money, some knowledge of medicine, and a beautiful wife. Now, with his perceptions quickened under the lash, he realized how dull he must have been in those old days; not so much with the facile dullness of youth, articulate because it has so little to say, but from that inertia born of prosperity and a belief in the permanence of tangible things. His practice lay among a class whose forbears had hobnobbed with his. He had a serious house full of ancestral gods, on the sacredness of which he most devoutly reckoned; and he had, to hold until Judgment Day, the beautiful wife. Then the other man appeared, the man who delighted in a changing universe, and preached the irony of fixed beliefs; and he, while St. John considered lenses in the office, made romantic love to the wife in the parlor. St. John never knew how it began. If he had known, it would have seemed to him far less dignified than he allowed himself to call it, even when he reflected that his wife had a great-grandmother of unknown extraction, though indisputably French. It was at first only a foolish little game, born of a man's greed and a woman's vanity, full of roses, echoing regrets, sighs over coming absence, and deification of chivalry and beauty. The woman was a flower plucked too soon; the man a martyr denied the wearing of her. These were theories easily engendered in a wife who had been wooed too coldly, and a free lance frankly amorous, and lately become an epicure at the feast. Whether the two would have sought each other, had they found no barriers, will not be known; but the frowning