

ago you could see the top of a pitch pine, of the kind called yellow pine hereabouts, though it is not a distinct species, projecting above the surface in deep water, many rods from the shore. It was even supposed by some that the pond had sunk, and this was one of the primitive forest that formerly stood there. I find that even so long ago as 1792, in a "Topographical Description of the Town of Concord," by one of its citizens, in the Collections of the Massachusetts Historical Society, the author, after speaking of Walden and White Ponds, adds, "In the middle of the latter may be seen, when the water is very low, a tree which appears as if it grew in the place where it now stands, although the roots are fifty feet below the surface of the water; the top of this tree is broken off, and at that place measures fourteen inches in diameter." In the spring of '49 I talked with the man who lives nearest the pond in Sudbury, who told me that it was he who got out this tree ten or fifteen years before. As near as he could remember, it stood twelve or fifteen rods from the shore, where the water was thirty or forty feet deep. It was in the winter, and he had been getting out ice in the forenoon, and had resolved that in the afternoon, with the aid of his neighbors, he would take out the old yellow pine. He sawed a channel in the ice toward the shore, and hauled it over and along and out on to the ice with oxen; but, before he had gone far in his work, he was surprised to find that it was wrong end upward, with the stumps of the branches pointing down, and the small end firmly fastened in the sandy bottom. It was about a foot in diameter at the big end, and he had expected to get a good saw-log, but

it was so rotten as to be fit only for fuel, if for that. He had some of it in his shed then. There were marks of an axe and of woodpeckers on the butt. He thought that it might have been a dead tree on the shore, but was finally blown over into the pond, and after the top had become water-logged, while the butt-end was still dry and light, had drifted out and sunk wrong end up. His father, eighty years old, could not remember when it was not there. Several pretty large logs may still be seen lying on the bottom, where, owing to the undulation of the surface, they look like huge water snakes in motion.

This pond has rarely been profaned by a boat, for there is little in it to tempt a fisherman. Instead of the white lily, which requires mud, or the common sweet flag, the blue flag (*Iris versicolor*) grows thinly in the pure water, rising from the stony bottom all around the shore, where it is visited by hummingbirds in June; and the color both of its bluish blades and its flowers and especially their reflections, are in singular harmony with the glaucous water.

White Pond and Walden are great crystals on the surface of the earth, Lakes of Light. If they were permanently congealed, and small enough to be clutched, they would, perchance, be carried off by slaves, like precious stones, to adorn the heads of emperors; but being liquid, and ample, and secured to us and our successors forever, we disregard them, and run after the diamond of Kohinoor. They are too pure to have a market value; they contain no muck. How much more beautiful than our lives, how much more transparent than our characters, are they! We never learned meanness of them. How

much fairer than the pool before the farmer's door, in which his ducks swim! Hither the clean wild ducks come. Nature has no human inhabitant who appreciates her. The birds with their plumage and their notes are in harmony with the flowers, but what youth or maiden conspires with the wild luxuriant beauty of Nature? She flourishes most alone, far from the towns where they reside. Talk of heaven! ye disgrace earth.

WINTER ANIMALS

WHEN the ponds were firmly frozen, they afforded not only new and shorter routes to many points, but new views from their surfaces of the familiar landscape around them. When I crossed Flint's Pond, after it was covered with snow, though I had often paddled about and skated over it, it was so unexpectedly wide and so strange that I could think of nothing but Baffin's Bay. The Lincoln hills rose up around me at the extremity of a snowy plain, in which I did not remember to have stood before; and the fishermen, at an indeterminate distance over the ice, moving slowly about with their wolfish dogs, passed for sealers or Esquimaux, or in misty weather loomed like fabulous creatures, and I did not know whether they were giants or pygmies. I took this course when I went to lecture in Lincoln in the evening, travelling in no road and passing no house between my own hut and the lecture room. In Goose Pond, which lay in my way, a colony of muskrats dwelt, and raised their cabins high above the ice, though none could be seen abroad when I crossed it. Walden, being like the rest usually bare of snow, or with only shallow and interrupted drifts on it, was my yard where I could walk freely when the snow was nearly two feet deep on a level elsewhere and the villagers were con-

fined to their streets. There, far from the village street, and except at very long intervals, from the jingle of sleigh-bells, I slid and skated, as in a vast moose-yard well trodden, overhung by oak woods and solemn pines bent down with snow or bristling with icicles.

For sounds in winter nights, and often in winter days, I heard the forlorn but melodious note of a hooting owl indefinitely far; such a sound as the frozen earth would yield if struck with a suitable plectrum, the very *lingua vernacula* of Walden Wood, and quite familiar to me at last, though I never saw the bird while it was making it. I seldom opened my door in a winter evening without hearing it; *Hoo hoo hoo, hooser hoo*, sounded sonorously, and the first three syllables accented somewhat like *how der do*; or sometimes *hoo hoo* only. One night in the beginning of winter, before the pond froze over, about nine o'clock, I was startled by the loud honking of a goose, and, stepping to the door, heard the sound of their wings like a tempest in the woods as they flew low over my house. They passed over the pond toward Fair Haven, seemingly deterred from settling by my light, their commodore honking all the while with a regular beat. Suddenly an unmistakable cat owl from very near me, with the most harsh and tremendous voice I ever heard from any inhabitant of the woods, responded at regular intervals to the goose, as if determined to expose and disgrace this intruder from Hudson's Bay by exhibiting a greater compass and volume of voice in a native, and *boo-hoo* him out of Concord horizon. What do you mean by alarming the citadel at this time of night consecrated to me? Do you

think I am ever caught napping at such an hour, and that I have not got lungs and a larynx as well as yourself? *Boo-hoo, boo-hoo, boo-hoo!* It was one of the most thrilling discords I ever heard. And yet, if you had a discriminating ear, there were in it the elements of a concord such as these plains never saw nor heard.

I also heard the whooping of the ice in the pond, my great bed-fellow in that part of Concord, as if it were restless in its bed and would fain turn over, were troubled with flatulency and bad dreams; or I was waked by the cracking of the ground by the frost, as if some one had driven a team against my door, and in the morning would find a crack in the earth a quarter of a mile long and a third of an inch wide.

Sometimes I heard the foxes as they ranged over the snow-crust, in moonlight nights, in search of a partridge or other game, barking raggedly and demoniacally like forest dogs, as if laboring with some anxiety, or seeking expression, struggling for light and to be dogs outright and run freely in the streets; for if we take the ages into our account, may there not be a civilization going on among brutes as well as men? They seemed to me to be rudimental, burrowing men, still standing on their defence, awaiting their transformation. Sometimes one came near to my window, attracted by my light, barked a vulpine curse at me, and then retreated.

Usually the red squirrel (*Sciurus Hudsonius*) waked me in the dawn, coursing over the roof and up and down the sides of the house, as if sent out of the woods for this purpose. In the course of the winter I threw out half a bushel of ears of sweet corn, which had not

got ripe, on to the snow-crust by my door, and was amused by watching the motions of the various animals which were baited by it. In the twilight and the night the rabbits came regularly and made a hearty meal. All day long the red squirrels came and went, and afforded me much entertainment by their manœuvres. One would approach at first warily through the shrub oaks, running over the snow-crust by fits and starts like a leaf blown by the wind, now a few paces this way, with wonderful speed and waste of energy, making inconceivable haste with his "trotters," as if it were for a wager, and now as many paces that way, but never getting on more than half a rod at a time; and then suddenly pausing with a ludicrous expression and a gratuitous somerset, as if all the eyes in the universe were fixed on him, — for all the motions of a squirrel, even in the most solitary recesses of the forest, imply spectators as much as those of a dancing girl, — wasting more time in delay and circumspection than would have sufficed to walk the whole distance, — I never saw one walk, — and then suddenly, before you could say Jack Robinson, he would be in the top of a young pitch pine, winding up his clock and chiding all imaginary spectators, soliloquizing and talking to all the universe at the same time, — for no reason that I could ever detect, or he himself was aware of, I suspect. At length he would reach the corn, and selecting a suitable ear, frisk about in the same uncertain trigonometrical way to the topmost stick of my wood-pile, before my window, where he looked me in the face, and there sit for hours, supplying himself with a new ear from time

to time, nibbling at first voraciously and throwing the half-naked cobs about; till at length he grew more dainty still and played with his food, tasting only the inside of the kernel, and the ear, which was held balanced over the stick by one paw, slipped from his careless grasp and fell to the ground, when he would look over at it with a ludicrous expression of uncertainty, as if suspecting that it had life, with a mind not made up whether to get it again, or a new one, or be off; now thinking of corn, then listening to hear what was in the wind. So the little impudent fellow would waste many an ear in a forenoon; till at last, seizing some longer and plumper one, considerably bigger than himself, and skilfully balancing it, he would set out with it to the woods, like a tiger with a buffalo, by the same zigzag course and frequent pauses, scratching along with it as if it were too heavy for him and falling all the while, making its fall a diagonal between a perpendicular and horizontal, being determined to put it through at any rate; — a singularly frivolous and whimsical fellow; — and so he would get off with it to where he lived, perhaps carry it to the top of a pine tree forty or fifty rods distant, and I would afterwards find the cobs strewn about the woods in various directions.

At length the jays arrive, whose discordant screams were heard long before, as they were warily making their approach an eighth of a mile off, and in a stealthy and sneaking manner they flit from tree to tree, nearer and nearer, and pick up the kernels which the squirrels have dropped. Then, sitting on a pitch pine bough, they attempt to swallow in their haste a kernel which is too

big for their throats and chokes them; and after great labor they disgorge it, and spend an hour in the endeavor to crack it by repeated blows with their bills. They were manifestly thieves, and I had not much respect for them; but the squirrels, though at first shy, went to work as if they were taking what was their own.

Meanwhile also came the chickadees in flocks, which, picking up the crumbs the squirrels had dropped, flew to the nearest twig, and, placing them under their claws, hammered away at them with their little bills, as if it were an insect in the bark, till they were sufficiently reduced for their slender throats. A little flock of these titmice came daily to pick a dinner out of my wood-pile, or the crumbs at my door, with faint flitting lispings notes, like the tinkling of icicles in the grass, or else with sprightly *day day day*, or more rarely, in springlike days, a wiry summery *phe-be* from the woodside. They were so familiar that at length one alighted on an armful of wood which I was carrying in, and pecked at the sticks without fear. I once had a sparrow alight upon my shoulder for a moment while I was hoeing in a village garden, and I felt that I was more distinguished by that circumstance than I should have been by any epaulet I could have worn. The squirrels also grew at last to be quite familiar, and occasionally stepped upon my shoe, when that was the nearest way.

When the ground was not yet quite covered, and again near the end of winter, when the snow was melted on my south hillside and about my wood-pile, the partridges came out of the woods morning and evening to feed

there. Whichever side you walk in the woods the partridge bursts away on whirring wings, jarring the snow from the dry leaves and twigs on high, which comes sifting down in the sunbeams like golden dust, for this brave bird is not to be scared by winter. It is frequently covered up by drifts, and, it is said, "sometimes plunges from on wing into the soft snow, where it remains concealed for a day or two." I used to start them in the open land also, where they had come out of the woods at sunset to "bud" the wild apple trees. They will come regularly every evening to particular trees, where the cunning sportsman lies in wait for them, and the distant orchards next the woods suffer thus not a little. I am glad that the partridge gets fed, at any rate. It is Nature's own bird which lives on buds and diet-drink.

In dark winter mornings, or in short winter afternoons, I sometimes heard a pack of hounds threading all the woods with hounding cry and yelp, unable to resist the instinct of the chase, and the note of the hunting-horn at intervals, proving that man was in the rear. The woods ring again, and yet no fox bursts forth on to the open level of the pond, nor following pack pursuing their Actæon. And perhaps at evening I see the hunters returning with a single brush trailing from their sleigh for a trophy, seeking their inn. They tell me that if the fox would remain in the bosom of the frozen earth he would be safe, or if he would run in a straight line away no foxhound could overtake him; but, having left his pursuers far behind, he stops to rest and listen till they come up, and when he runs he circles round to his old haunts,

where the hunters await him. Sometimes, however, he will run upon a wall many rods, and then leap off far to one side, and he appears to know that water will not retain his scent. A hunter told me that he once saw a fox pursued by hounds burst out on to Walden when the ice was covered with shallow puddles, run part way across, and then return to the same shore. Ere long the hounds arrived, but here they lost the scent. Sometimes a pack hunting by themselves would pass my door, and circle round my house, and yelp and hound without regarding me, as if afflicted by a species of madness, so that nothing could divert them from the pursuit. Thus they circle until they fall upon the recent trail of a fox, for a wise hound will forsake everything else for this. One day a man came to my hut from Lexington to inquire after his hound that made a large track, and had been hunting for a week by himself. But I fear that he was not the wiser for all I told him, for every time I attempted to answer his questions he interrupted me by asking, "What do you do here?" He had lost a dog, but found a man.

One old hunter who has a dry tongue, who used to come to bathe in Walden once every year when the water was warmest, and at such times looked in upon me, told me that many years ago he took his gun one afternoon and went out for a cruise in Walden Wood; and as he walked the Wayland road he heard the cry of hounds approaching, and ere long a fox leaped the wall into the road, and as quick as thought leaped the other wall out of the road, and his swift bullet had not touched him. Some way behind came an old hound and her

three pups in full pursuit, hunting on their own account, and disappeared again in the woods. Late in the afternoon, as he was resting in the thick woods south of Walden, he heard the voice of the hounds far over toward Fair Haven still pursuing the fox; and on they came, their hounding cry which made all the woods ring sounding nearer and nearer, now from Well Meadow, now from the Baker Farm. For a long time he stood still and listened to their music, so sweet to a hunter's ear, when suddenly the fox appeared, threading the solemn aisles with an easy coursing pace, whose sound was concealed by a sympathetic rustle of the leaves, swift and still, keeping the ground, leaving his pursuers far behind; and, leaping upon a rock amid the woods, he sat erect and listening, with his back to the hunter. For a moment compassion restrained the latter's arm; but that was a short-lived mood, and as quick as thought can follow thought his piece was levelled, and *whang!*—the fox rolling over the rock lay dead on the ground. The hunter still kept his place and listened to the hounds. Still on they came, and now the near woods resounded through all their aisles with their demoniac cry. At length the old hound burst into view with muzzle to the ground, and snapping the air as if possessed, and ran directly to the rock; but spying the dead fox she suddenly ceased her hounding, as if struck dumb with amazement, and walked round and round him in silence; and one by one her pups arrived, and, like their mother, were sobered into silence by the mystery. Then the hunter came forward and stood in their midst, and the mystery was solved. They waited in silence while he skinned

the fox, then followed the brush a while, and at length turned off into the woods again. That evening a Weston squire came to the Concord hunter's cottage to inquire for his hounds, and told how for a week they had been hunting on their own account from Weston woods. The Concord hunter told him what he knew and offered him the skin; but the other declined it and departed. He did not find his hounds that night, but the next day learned that they had crossed the river and put up at a farmhouse for the night, whence, having been well fed, they took their departure early in the morning.

The hunter who told me this could remember one Sam Nutting, who used to hunt bears on Fair Haven Ledges, and exchange their skins for rum in Concord village; who told him, even, that he had seen a moose there. Nutting had a famous foxhound named Burgoyne, — he pronounced it Bugine, — which my informant used to borrow. In the "Wast Book" of an old trader of this town, who was also a captain, town-clerk, and representative, I find the following entry. Jan. 18th, 1742-3, "John Melven Cr. by 1 Grey Fox 0 — 2 — 3;" they are not now found here; and in his ledger, Feb. 7th, 1743, Hezekiah Stratton has credit "by $\frac{1}{2}$ a Catt skin 0 — 1 — $4\frac{1}{2}$;" of course, a wild-cat, for Stratton was a sergeant in the old French war, and would not have got credit for hunting less noble game. Credit is given for deerskins also, and they were daily sold. One man still preserves the horns of the last deer that was killed in this vicinity, and another has told me the particulars of the hunt in which his uncle was engaged. The hunters were formerly a numerous and merry crew here. I remember

well one gaunt Nimrod who would catch up a leaf by the roadside and play a strain on it wilder and more melodious, if my memory serves me, than any hunting-horn.

At midnight, when there was a moon, I sometimes met with hounds in my path prowling about the woods, which would skulk out of my way, as if afraid, and stand silent amid the bushes till I had passed.

Squirrels and wild mice disputed for my store of nuts. There were scores of pitch pines around my house, from one to four inches in diameter, which had been gnawed by mice the previous winter, — a Norwegian winter for them, for the snow lay long and deep, and they were obliged to mix a large proportion of pine bark with their other diet. These trees were alive and apparently flourishing at midsummer, and many of them had grown a foot, though completely girdled; but after another winter such were without exception dead. It is remarkable that a single mouse should thus be allowed a whole pine tree for its dinner, gnawing round instead of up and down it; but perhaps it is necessary in order to thin these trees, which are wont to grow up densely.

The hares (*Lepus Americanus*) were very familiar. One had her form under my house all winter, separated from me only by the flooring, and she startled me each morning by her hasty departure when I began to stir, — thump, thump, thump, striking her head against the floor timbers in her hurry. They used to come round my door at dusk to nibble the potato parings which I had thrown out, and were so nearly the color of the ground that they could hardly be distinguished when still. Some-

times in the twilight I alternately lost and recovered sight of one sitting motionless under my window. When I opened my door in the evening, off they would go with a squeak and a bounce. Near at hand they only excited my pity. One evening one sat by my door two paces from me, at first trembling with fear, yet unwilling to move; a poor wee thing, lean and bony, with ragged ears and sharp nose, scant tail and slender paws. It looked as if Nature no longer contained the breed of nobler bloods, but stood on her last toes. Its large eyes appeared young and unhealthy, almost dropsical. I took a step, and lo, away it scud with an elastic spring over the snow-crust, straightening its body and its limbs into graceful length, and soon put the forest between me and itself, — the wild free venison, asserting its vigor and the dignity of Nature. Not without reason was its slenderness. Such then was its nature. (*Lepus, levipes*, light-foot, some think.)

What is a country without rabbits and partridges? They are among the most simple and indigenous animal products; ancient and venerable families known to antiquity as to modern times; of the very hue and substance of Nature, nearest allied to leaves and to the ground, — and to one another; it is either winged or it is legged. It is hardly as if you had seen a wild creature when a rabbit or a partridge bursts away, only a natural one, as much to be expected as rustling leaves. The partridge and the rabbit are still sure to thrive, like true natives of the soil, whatever revolutions occur. If the forest is cut off, the sprouts and bushes which spring up afford them concealment, and they become more numerous

than ever. That must be a poor country indeed that does not support a hare. Our woods teem with them both, and around every swamp may be seen the partridge or rabbit walk, beset with twiggy fences and horse-hair snares, which some cow-boy tends.

JOHN BURROUGHS

THE SNOW-WALKERS

HE who marvels at the beauty of the world in summer will find equal cause for wonder and admiration in winter. It is true the pomp and the pageantry are swept away, but the essential elements remain, — the day and the night, the mountain and the valley, the elemental play and succession and the perpetual presence of the infinite sky. In winter the stars seem to have re-kindled their fires, the moon achieves a fuller triumph, and the heavens wear a look of a more exalted simplicity. Summer is more wooing and seductive, more versatile and human, appeals to the affections and the sentiments, and fosters inquiry and the art impulse. Winter is of a more heroic cast, and addresses the intellect. The severe studies and disciplines come easier in winter. One imposes larger tasks upon himself, and is less tolerant of his own weaknesses.

The tendinous part of the mind, so to speak, is more developed in winter; the fleshy, in summer. I should say winter had given the bone and sinew to Literature, summer the tissues and blood.

The simplicity of winter has a deep moral. The return of nature, after such a career of splendor and prodigality, to habits so simple and austere, is not lost upon either the head or the heart. It is the philosopher coming back from the banquet and the wine to a cup of water and a crust of bread.

And then this beautiful masquerade of the elements, — the novel disguises our nearest friends put on! Here is another rain and another dew, water that will not flow, nor spill, nor receive the taint of an unclean vessel. And if we see truly, the same old beneficence and willingness to serve lurk beneath all.

Look up at the miracle of the falling snow, — the air a dizzy maze of whirling, eddying flakes, noiselessly transforming the world, the exquisite crystals dropping in ditch and gutter, and disguising in the same suit of spotless livery all objects upon which they fall. How novel and fine the first drifts! The old, dilapidated fence is suddenly set off with the most fantastic ruffles, scalloped and fluted after an unheard-of fashion! Looking down a long line of decrepit stone wall, in the trimming of which the wind had fairly run riot, I saw, as for the first time, what a severe yet master artist old Winter is. Ah, a severe artist! How stern the woods look, dark and cold and as rigid against the horizon as iron!

All life and action upon the snow have an added emphasis and significance. Every expression is underscored. Summer has few finer pictures than this winter one of the farmer foddering his cattle from a stack upon the clean snow, — the movement, the sharply defined figures, the great green flakes of hay, the long file of patient cows, the advance just arriving and pressing eagerly for the choicest morsels, — and the bounty and providence it suggests. Or the chopper in the woods, — the prostrate tree, the white new chips scattered about, his easy triumph over the cold, his coat hanging to a

limb, and the clear, sharp ring of his axe. The woods are rigid and tense, keyed up by the frost, and resound like a stringed instrument. Or the road-breakers, sallying forth with oxen and sleds in the still, white world, the day after the storm, to restore the lost track and demolish the beleaguering drifts.

All sounds are sharper in winter; the air transmits better. At night I hear more distinctly the steady roar of the North Mountain. In summer it is a sort of complacent purr, as the breezes stroke down its sides; but in winter always the same low, sullen growl.

A severe artist! No longer the canvas and the pigments, but the marble and the chisel. When the nights are calm and the moon full, I go out to gaze upon the wonderful purity of the moonlight and the snow. The air is full of latent fire, and the cold warms me — after a different fashion from that of the kitchen stove. The world lies about me in a “trance of snow.” The clouds are pearly and iridescent, and seem the farthest possible remove from the condition of a storm, — the ghosts of clouds, the indwelling beauty freed from all dross. I see the hills, bulging with great drifts, lift themselves up cool and white against the sky, the black lines of fences here and there obliterated by the depth of the snow. Presently a fox barks away up next the mountain, and I imagine I can almost see him sitting there, in his furs, upon the illuminated surface, and looking down in my direction. As I listen, one answers him from behind the woods in the valley. What a wild winter sound, wild and weird, up among the ghostly hills! Since the wolf has ceased to howl upon these mountains, and the panther

to scream, there is nothing to be compared with it. So wild! I get up in the middle of the night to hear it. It is refreshing to the ear, and one delights to know that such wild creatures are among us. At this season Nature makes the most of every throb of life that can withstand her severity. How heartily she indorses this fox! In what bold relief stand out the lives of all walkers of the snow! The snow is a great tell-tale, and blabs as effectually as it obliterates. I go into the woods, and know all that has happened. I cross the fields, and if only a mouse has visited his neighbor, the fact is chronicled.

The red fox is the only species that abounds in my locality; the little gray fox seems to prefer a more rocky and precipitous country, and a less rigorous climate; the cross fox is occasionally seen, and there are traditions of the silver gray among the oldest hunters. But the red fox is the sportsman's prize, and the only furbearer worthy of note in these mountains.¹ I go out in the morning, after a fresh fall of snow, and see at all points where he has crossed the road. Here he has leisurely passed within rifle-range of the house, evidently reconnoitring the premises with an eye to the hen-roost. That clear, sharp track, — there is no mistaking it for the clumsy footprint of a little dog. All his wildness and agility are photographed in it. Here he has taken fright, or suddenly recollected an engagement, and in long, graceful leaps, barely touching the fence, has gone careering up the hill as fleet as the wind.

The wild, buoyant creature, how beautiful he is! I

¹ A spur of the Catskills.

had often seen his dead carcass, and at a distance had witnessed the hounds drive him across the upper fields; but the thrill and excitement of meeting him in his wild freedom in the woods were unknown to me till, one cold winter day, drawn thither by the baying of a hound, I stood near the summit of the mountain, waiting a renewal of the sound, that I might determine the course of the dog and choose my position, — stimulated by the ambition of all young Nimrods to bag some notable game. Long I waited, and patiently, till, chilled and benumbed, I was about to turn back, when, hearing a slight noise, I looked up and beheld a most superb fox, loping along with inimitable grace and ease, evidently disturbed, but not pursued by the hound, and so absorbed in his private meditations that he failed to see me, though I stood transfixed with amazement and admiration, not ten yards distant. I took his measure at a glance, — a large male, with dark legs, and massive tail tipped with white, — a most magnificent creature; but so astonished and fascinated was I by this sudden appearance and matchless beauty, that not till I had caught the last glimpse of him, as he disappeared over a knoll, did I awake to my duty as a sportsman, and realize what an opportunity to distinguish myself I had unconsciously let slip. I clutched my gun, half angrily, as if it was to blame, and went home out of humor with myself and all fox-kind. But I have since thought better of the experience, and concluded that I bagged the game after all, the best part of it, and fleeced Reynard of something more valuable than his fur, without his knowledge.

This is thoroughly a winter sound, — this voice of the hound upon the mountain, — and one that is music to many ears. The long trumpet-like bay, heard for a mile or more, — now faintly back in the deep recesses of the mountain, — now distinct, but still faint, as the hound comes over some prominent point and the wind favors, — anon entirely lost in the gully, — then breaking out again much nearer, and growing more and more pronounced as the dog approaches, till, when he comes around the brow of the mountain, directly above you, the barking is loud and sharp. On he goes along the northern spur, his voice rising and sinking as the wind and the lay of the ground modify it, till lost to hearing.

The fox usually keeps half a mile ahead, regulating his speed by that of the hound, occasionally pausing a moment to divert himself with a mouse, or to contemplate the landscape, or to listen for his pursuer. If the hound press him too closely, he leads off from mountain to mountain, and so generally escapes the hunter; but if the pursuit be slow, he plays about some ridge or peak, and falls a prey, though not an easy one, to the experienced sportsman.

A most spirited and exciting chase occurs when the farm-dog gets close upon one in the open field, as sometimes happens in the early morning. The fox relies so confidently upon his superior speed, that I imagine he half tempts the dog to the race. But if the dog be a smart one, and their course lie downhill, over smooth ground, Reynard must put his best foot forward, and then sometimes suffer the ignominy of being run over by his pursuer, who, however, is quite unable to pick

him up, owing to the speed. But when they mount the hill, or enter the woods, the superior nimbleness and agility of the fox tell at once, and he easily leaves the dog far in his rear. For a cur less than his own size he manifests little fear, especially if the two meet alone, remote from the house. In such cases, I have seen first one turn tail, then the other.

A novel spectacle often occurs in summer, when the female has young. You are rambling on the mountain, accompanied by your dog, when you are startled by that wild, half-threatening squall, and in a moment perceive your dog, with inverted tail, and shame and confusion in his looks, sneaking toward you, the old fox but a few rods in his rear. You speak to him sharply, when he bristles up, turns about, and, barking, starts off vigorously, as if to wipe out the dishonor; but in a moment comes sneaking back more abashed than ever, and owns himself unworthy to be called a dog. The fox fairly shames him out of the woods. The secret of the matter is her sex, though her conduct, for the honor of the fox be it said, seems to be prompted only by solicitude for the safety of her young.

One of the most notable features of the fox is his large and massive tail. Seen running on the snow at a distance, his tail is quite as conspicuous as his body; and, so far from appearing a burden, seems to contribute to his lightness and buoyancy. It softens the outline of his movements, and repeats or continues to the eye the ease and poise of his carriage. But, pursued by the hounds on a wet, thawy day, it often becomes so heavy and be-draggled as to prove a serious inconvenience, and com-

pels him to take refuge in his den. He is very loath to do this; both his pride and the traditions of his race stimulate him to run it out, and win by fair superiority of wind and speed; and only a wound or a heavy and moppish tail will drive him to avoid the issue in this manner.

To learn his surpassing shrewdness and cunning, attempt to take him with a trap. Rogue that he is, he always suspects some trick, and one must be more of a fox than he is himself to overreach him. At first sight it would appear easy enough. With apparent indifference he crosses your path, or walks in your footsteps in the field, or travels along the beaten highway, or lingers in the vicinity of stacks and remote barns. Carry the carcass of a pig, or a fowl, or a dog, to a distant field in midwinter, and in a few nights his tracks cover the snow about it.

The inexperienced country youth, misled by this seeming carelessness of Reynard, suddenly conceives a project to enrich himself with fur, and wonders that the idea has not occurred to him before, and to others. I knew a youthful yeoman of this kind, who imagined he had found a mine of wealth on discovering on a remote side-hill, between two woods, a dead porker, upon which it appeared all the foxes of the neighborhood had nightly banqueted. The clouds were burdened with snow; and as the first flakes commenced to eddy down, he set out, trap and broom in hand, already counting over in imagination the silver quarters he would receive for his first fox-skin. With the utmost care, and with a palpitating heart, he removed enough

of the trodden snow to allow the trap to sink below the surface. Then, carefully sifting the light element over it and sweeping his tracks full, he quickly withdrew, laughing exultingly over the little surprise he had prepared for the cunning rogue. The elements conspired to aid him, and the falling snow rapidly obliterated all vestiges of his work. The next morning at dawn he was on his way to bring in his fur. The snow had done its work effectually, and, he believed, had kept his secret well. Arrived in sight of the locality, he strained his vision to make out his prize lodged against the fence at the foot of the hill. Approaching nearer, the surface was unbroken, and doubt usurped the place of certainty in his mind. A slight mound marked the site of the porker, but there was no footprint near it. Looking up the hill, he saw where Reynard had walked leisurely down toward his wonted bacon till within a few yards of it, when he had wheeled, and with prodigious strides disappeared in the woods. The young trapper saw at a glance what a comment this was upon his skill in the art, and, indignantly exhuming the iron, he walked home with it, the stream of silver quarters suddenly setting in another direction.

The successful trapper commences in the fall, or before the first deep snow. In a field not too remote, with an old axe he cuts a small place, say ten inches by fourteen, in the frozen ground, and removes the earth to the depth of three or four inches, then fills the cavity with dry ashes, in which are placed bits of roasted cheese. Reynard is very suspicious at first, and gives the place a wide berth. It looks like design, and he

will see how the thing behaves before he approaches too near. But the cheese is savory and the cold severe. He ventures a little closer every night, until he can reach and pick a piece from the surface. Emboldened by success, like other mortals, he presently digs freely among the ashes, and, finding a fresh supply of the delectable morsels every night, is soon thrown off his guard and his suspicions quite lulled. After a week of baiting in this manner, and on the eve of a light fall of snow, the trapper carefully conceals his trap in the bed, first smoking it thoroughly with hemlock boughs to kill or neutralize the smell of the iron. If the weather favors and the proper precautions have been taken, he may succeed, though the chances are still greatly against him.

Reynard is usually caught very lightly, seldom more than the ends of his toes being between the jaws. He sometimes works so cautiously as to spring the trap without injury even to his toes, or may remove the cheese night after night without even springing it. I knew an old trapper who, on finding himself outwitted in this manner, tied a bit of cheese to the pan, and next morning had poor Reynard by the jaw. The trap is not fastened, but only encumbered with a clog, and is all the more sure in its hold by yielding to every effort of the animal to extricate himself.

When Reynard sees his captor approaching, he would fain drop into a mouse-hole to render himself invisible. He crouches to the ground and remains perfectly motionless until he perceives himself discovered, when he makes one desperate and final effort to escape, but ceases all struggling as you come up, and behaves

in a manner that stamps him a very timid warrior, — cowering to the earth with a mingled look of shame, guilt, and abject fear. A young farmer told me of tracing one with his trap to the border of a wood, where he discovered the cunning rogue trying to hide by embracing a small tree. Most animals, when taken in a trap, show fight; but Reynard has more faith in the nimbleness of his feet than in the terror of his teeth.

Entering the woods, the number and variety of the tracks contrast strongly with the rigid, frozen aspect of things. Warm jets of life still shoot and play amid this snowy desolation. Fox tracks are far less numerous than in the fields; but those of hares, skunks, partridges, squirrels, and mice abound. The mice tracks are very pretty, and look like a sort of fantastic stitching on the coverlid of the snow. One is curious to know what brings these tiny creatures from their retreats; they do not seem to be in quest of food, but rather to be traveling about for pleasure or sociability, though always going post-haste, and linking stump with stump and tree with tree by fine, hurried strides. That is when they travel openly; but they have hidden passages and winding galleries under the snow, which undoubtedly are their main avenues of communication. Here and there these passages rise so near the surface as to be covered by only a frail arch of snow, and a slight ridge betrays their course to the eye. I know him well. He is known to the farmer as the "deer mouse," to the naturalist as the white-footed mouse, — a very beautiful creature, nocturnal in his habits, with large ears, and large, fine eyes full of a wild, harmless look. He is daintily marked, with

white feet and a white belly. When disturbed by day he is very easily captured, having none of the cunning or viciousness of the common Old World mouse.

It is he who, high in the hollow trunk of some tree, lays by a store of beechnuts for winter use. Every nut is carefully shelled, and the cavity that serves as store-house lined with grass and leaves. The wood-chopper frequently squanders this precious store. I have seen half a peck taken from one tree, as clean and white as if put up by the most delicate hands, — as they were. How long it must have taken the little creature to collect this quantity, to hull them one by one, and convey them up to his fifth-story chamber! He is not confined to the woods, but is quite as common in the fields, particularly in the fall, amid the corn and potatoes. When routed by the plow, I have seen the old one take flight with half a dozen young hanging to her teats, and with such reckless speed that some of the young would lose their hold and fly off amid the weeds. Taking refuge in a stump with the rest of her family, the anxious mother would presently come back and hunt up the missing ones.

The snow-walkers are mostly night-walkers also, and the record they leave upon the snow is the main clew one has to their life and doings. The hare is nocturnal in its habits, and though a very lively creature at night, with regular courses and run-ways through the wood, is entirely quiet by day. Timid as he is, he makes little effort to conceal himself, usually squatting beside a log, stump, or tree, and seeming to avoid rocks and ledges, where he might be partially housed from the cold and

the snow, but where also — and this consideration undoubtedly determines his choice — he would be more apt to fall a prey to his enemies. In this, as well as in many other respects, he differs from the rabbit proper: he never burrows in the ground, or takes refuge in a den or hole, when pursued. If caught in the open fields, he is much confused and easily overtaken by the dog; but in the woods, he leaves him at a bound. In summer, when first disturbed, he beats the ground violently with his feet, by which means he would express to you his surprise or displeasure; it is a dumb way he has of scolding. After leaping a few yards, he pauses an instant, as if to determine the degree of danger, and then hurries away with a much lighter tread.

His feet are like great pads, and his track has little of the sharp, articulated expression of Reynard's, or of animals that climb or dig. Yet it is very pretty like all the rest, and tells its own tale. There is nothing bold or vicious or vulpine in it, and his timid, harmless character is published at every leap. He abounds in dense woods, preferring localities filled with a small undergrowth of beech and birch, upon the bark of which he feeds. Nature is rather partial to him, and matches his extreme local habits and character with a suit that corresponds with his surroundings, — reddish gray in summer and white in winter.

The sharp-rayed track of the partridge adds another figure to this fantastic embroidery upon the winter snow. Her course is a clear, strong line, sometimes quite wayward, but generally very direct, steering for the densest, most impenetrable places, — leading you over logs and

through brush, alert and expectant, till, suddenly, she bursts up a few yards from you, and goes humming through the trees, — the complete triumph of endurance and vigor. Hardy native bird, may your tracks never be fewer, or your visits to the birch-tree less frequent!

The squirrel tracks — sharp, nervous, and wiry — have their histories also. But how rarely we see squirrels in winter! The naturalists say they are mostly torpid; yet evidently that little pocket-faced depredator, the chipmunk, was not carrying buckwheat for so many days to his hole for nothing: was he anticipating a state of torpidity, or providing against the demands of a very active appetite? Red and gray squirrels are more or less active all winter, though very shy, and, I am inclined to think, partially nocturnal in their habits. Here a gray one has just passed, — came down that tree and went up this; there he dug for a beechnut, and left the burr on the snow. How did he know where to dig? During an unusually severe winter I have known him to make long journeys to a barn, in a remote field, where wheat was stored. How did he know there was wheat there? In attempting to return, the adventurous creature was frequently run down and caught in the deep snow.

His home is in the trunk of some old birch or maple, with an entrance far up amid the branches. In the spring he builds himself a summer-house of small leafy twigs in the top of a neighboring beech, where the young are reared and much of the time is passed. But the safer retreat in the maple is not abandoned, and both old and young resort thither in the fall, or when danger threatens. Whether this temporary residence amid the branches is

for elegance or pleasure, or for sanitary reasons or domestic convenience, the naturalist has forgotten to mention.

The elegant creature, so cleanly in its habits, so graceful in its carriage, so nimble and daring in its movements, excites feelings of admiration akin to those awakened by the birds and the fairer forms of nature. His passage through the trees is almost a flight. Indeed, the flying squirrel has little or no advantage over him, and in speed and nimbleness cannot compare with him at all. If he miss his footing and fall, he is sure to catch on the next branch; if the connection be broken, he leaps recklessly for the nearest spray or limb, and secures his hold, even if it be by the aid of his teeth.

His career of frolic and festivity begins in the fall, after the birds have left us and the holiday spirit of nature has commenced to subside. How absorbing the pastime of the sportsman who goes to the woods in the still October morning in quest of him! You step lightly across the threshold of the forest, and sit down upon the first log or rock to await the signals. It is so still that the ear suddenly seems to have acquired new powers, and there is no movement to confuse the eye. Presently you hear the rustling of a branch, and see it sway or spring as the squirrel leaps from or to it; or else you hear a disturbance in the dry leaves, and mark one running upon the ground. He has probably seen the intruder, and, not liking his stealthy movements, desires to avoid a nearer acquaintance. Now he mounts a stump to see if the way is clear, then pauses a moment at the foot of a tree to take his bearings, his tail, as he skims

along, undulating behind him, and adding to the easy grace and dignity of his movements. Or else you are first advised of his proximity by the dropping of a false nut, or the fragments of the shucks rattling upon the leaves. Or, again, after contemplating you awhile unobserved, and making up his mind that you are not dangerous, he strikes an attitude on a branch, and commences to quack and bark, with an accompanying movement of his tail. Late in the afternoon, when the same stillness reigns, the same scenes are repeated. There is a black variety, quite rare, but mating freely with the gray, from which he seems to be distinguished only in color.

The track of the red squirrel may be known by its smaller size. He is more common and less dignified than the gray, and oftener guilty of petty larceny about the barns and grain-fields. He is most abundant in old barkpeelings, and low, dilapidated hemlocks, from which he makes excursions to the fields and orchards, spinning along the tops of the fences, which afford not only convenient lines of communication, but a safe retreat if danger threatens. He loves to linger about the orchard; and, sitting upright on the topmost stone in the wall, or on the tallest stake in the fence, chipping up an apple for the seeds, his tail conforming to the curve of his back, his paws shifting and turning the apple, he is a pretty sight, and his bright, pert appearance atones for all the mischief he does. At home, in the woods, he is the most frolicsome and loquacious. The appearance of anything unusual, if, after contemplating it a moment, he concludes it not dangerous, excites his un-

bounded mirth and ridicule, and he snickers and chatters, hardly able to contain himself; now darting up the trunk of a tree and squealing in derision, then hopping into position on a limb and dancing to the music of his own cackle, and all for your special benefit.

There is something very human in this apparent mirth and mockery of the squirrels. It seems to be a sort of ironical laughter, and implies self-conscious pride and exultation in the laugher. "What a ridiculous thing you are, to be sure!" he seems to say; "how clumsy and awkward, and what a poor show for a tail! Look at me, look at me!" — and he capers about in his best style. Again, he would seem to tease you and provoke your attention; then suddenly assumes a tone of good-natured, childlike defiance and derision. That pretty little imp the chipmunk will sit on the stone above his den and defy you, as plainly as if he said so, to catch him before he can get into his hole if you can. You hurl a stone at him, and "No, you did n't!" comes up from the depth of his retreat.

In February another track appears upon the snow, slender and delicate, about a third larger than that of the gray squirrel, indicating no haste or speed, but, on the contrary, denoting the most imperturbable ease and leisure, the footprints so close together that the trail appears like a chain of curiously carved links. Sir *Mephitis mephitica*, or, in plain English, the skunk, has awakened from his six weeks' nap, and come out into society again. He is a nocturnal traveler, very bold and impudent, coming quite up to the barn and outbuildings, and sometimes taking up his quarters for the season

under the haymow. There is no such word as hurry in his dictionary, as you may see by his path upon the snow. He has a very sneaking, insinuating way, and goes creeping about the fields and woods, never once in a perceptible degree altering his gait, and, if a fence crosses his course, steers for a break or opening to avoid climbing. He is too indolent even to dig his own hole, but appropriates that of a woodchuck, or hunts out a crevice in the rocks, from which he extends his rambling in all directions, preferring damp, thawy weather. He has very little discretion or cunning, and holds a trap in utter contempt, stepping into it as soon as beside it, relying implicitly for defense against all forms of danger upon the unsavory punishment he is capable of inflicting. He is quite indifferent to both man and beast, and will not hurry himself to get out of the way of either. Walking through the summer fields at twilight, I have come near stepping upon him, and was much the more disturbed of the two. When attacked in the open field he confounds the plans of his enemies by the unheard-of tactics of exposing his rear rather than his front. "Come if you dare," he says, and his attitude makes even the farm-dog pause. After a few encounters of this kind, and if you entertain the usual hostility towards him, your mode of attack will speedily resolve itself into moving about him in a circle, the radius of which will be the exact distance at which you can hurl a stone with accuracy and effect.

He has a secret to keep and knows it, and is careful not to betray himself until he can do so with the most telling effect. I have known him to preserve his serenity

even when caught in a steel trap, and look the very picture of injured innocence, manœuvring carefully and deliberately to extricate his foot from the grasp of the naughty jaws. Do not by any means take pity on him, and lend a helping hand!

How pretty his face and head! How fine and delicate his teeth, like a weasel's or a cat's! When about a third grown, he looks so well that one covets him for a pet. He is quite precocious, however, and capable, even at this tender age, of making a very strong appeal to your sense of smell.

No animal is more cleanly in his habits than he. He is not an awkward boy who cuts his own face with his whip; and neither his flesh nor his fur hints the weapon with which he is armed. The most silent creature known to me, he makes no sound, so far as I have observed, save a diffuse, impatient noise, like that produced by beating your hand with a whisk-broom, when the farm-dog has discovered his retreat in the stone fence. He renders himself obnoxious to the farmer by his partiality for hen's eggs and young poultry. He is a confirmed epicure, and at plundering hen-roosts an expert. Not the full-grown fowls are his victims, but the youngest and most tender. At night Mother Hen receives under her maternal wings a dozen newly hatched chickens, and with much pride and satisfaction feels them all safely tucked away in her feathers. In the morning she is walking about disconsolately, attended by only two or three of all that pretty brood. What has happened? Where are they gone? That pickpocket Sir Mephitis could solve the mystery. Quietly has he approached,

under cover of darkness, and one by one relieved her of her precious charge. Look closely and you will see their little yellow legs and beaks, or part of a mangled form, lying about on the ground. Or, before the hen has hatched, he may find her out, and, by the same sleight of hand, remove every egg, leaving only the empty blood-stained shells to witness against him. The birds, especially the ground-builders, suffer in like manner from his plundering propensities.

The secretion upon which he relies for defense, and which is the chief source of his unpopularity, while it affords good reasons against cultivating him as a pet, and mars his attractiveness as game, is by no means the greatest indignity that can be offered to a nose. It is a rank, living smell, and has none of the sickening qualities of disease or putrefaction. Indeed, I think a good smeller will enjoy its most refined intensity. It approaches the sublime, and makes the nose tingle. It is tonic and bracing, and, I can readily believe, has rare medicinal qualities. I do not recommend its use as eyewater, though an old farmer assures me it has undoubted virtues when thus applied. Hearing, one night, a disturbance among his hens, he rushed suddenly out to catch the thief, when Sir Mephitis, taken by surprise, and no doubt much annoyed at being interrupted, discharged the vials of his wrath full in the farmer's face, and with such admirable effect that, for a few moments, he was completely blinded, and powerless to revenge himself upon the rogue, who embraced the opportunity to make good his escape; but he declared that afterwards his eyes felt as if purged by fire, and his sight was much clearer.

In March that brief summary of a bear the raccoon comes out of his den in the ledges, and leaves his sharp digitigrade track upon the snow, — traveling not unfrequently in pairs, — a lean, hungry couple; bent on pillage and plunder. They have an unenviable time of it, — feasting in the summer and fall, hibernating in winter, and starving in spring. In April I have found the young of the previous year creeping about the fields, so reduced by starvation as to be quite helpless, and offering no resistance to my taking them up by the tail and carrying them home.

The old ones also become very much emaciated, and come boldly up to the barn or other outbuildings in quest of food. I remember, one morning in early spring, of hearing old Cuff, the farm-dog, barking vociferously before it was yet light. When we got up we discovered him, at the foot of an ash-tree standing about thirty rods from the house, looking up at some gray object in the leafless branches, and by his manners and his voice evincing great impatience that we were so tardy in coming to his assistance. Arrived on the spot, we saw in the tree a coon of unusual size. One bold climber proposed to go up and shake him down. This was what old Cuff wanted, and he fairly bounded with delight as he saw his young master shinning up the tree. Approaching within eight or ten feet of the coon, he seized the branch to which it clung and shook long and fiercely. But the coon was in no danger of losing its hold, and, when the climber paused to renew his hold, it turned toward him with a growl, and showed very clearly a purpose to advance to the attack. This caused his pur-

suer to descend to the ground with all speed. When the coon was finally brought down with a gun, he fought the dog, which was a large, powerful animal, with great fury, returning bite for bite for some moments; and after a quarter of an hour had elapsed and his unequal antagonist had shaken him as a terrier does a rat, making his teeth meet through the small of his back, the coon still showed fight.

They are very tenacious of life, and like the badger will always whip a dog of their own size and weight. A woodchuck can bite severely, having teeth that cut like chisels, but a coon has agility and power of limb as well.

They are considered game only in the fall, or towards the close of summer, when they become fat and their flesh sweet. At this time, cooning in the remote interior is a famous pastime. As this animal is entirely nocturnal in its habits, it is hunted only at night. A piece of corn on some remote side-hill near the mountain, or between two pieces of woods, is most apt to be frequented by them. While the corn is yet green they pull the ears down like hogs, and, tearing open the sheathing of husks, eat the tender, succulent kernels, bruising and destroying much more than they devour. Sometimes their ravages are a matter of serious concern to the farmer. But every such neighborhood has its coon-dog, and the boys and young men dearly love the sport. The party sets out about eight or nine o'clock of a dark, moonless night, and stealthily approaches the corn-field. The dog knows his business, and when he is put into a patch of corn and told to "hunt them up" he makes a thorough search, and will not be misled by any other

scent. You hear him rattling through the corn, hither and yon, with great speed. The coons prick up their ears, and leave on the opposite side of the field. In the stillness you may sometimes hear a single stone rattle on the wall as they hurry toward the woods. If the dog finds nothing, he comes back to his master in a short time, and says in his dumb way, "No coon there." But if he strikes a trail, you presently hear a louder rattling on the stone wall, and then a hurried bark as he enters the woods, followed in a few minutes by loud and repeated barking as he reaches the foot of the tree in which the coon has taken refuge. Then follows a pellmell rush of the cooning party up the hill, into the woods, through the brush and the darkness, falling over prostrate trees, pitching into gullies and hollows, losing hats and tearing clothes, till finally, guided by the baying of the faithful dog, the tree is reached. The first thing now in order is to kindle a fire, and, if its light reveals the coon, to shoot him; if not, to fell the tree with an axe. If this happens to be too great a sacrifice of timber and of strength, to sit down at the foot of the tree till morning.

But with March our interest in these phases of animal life, which winter has so emphasized and brought out, begins to decline. Vague rumors are afloat in the air of a great and coming change. We are eager for Winter to be gone, since he, too, is fugitive and cannot keep his place. Invisible hands deface his icy statuary; his chisel has lost its cunning. The drifts, so pure and exquisite, are now earth-stained and weather-worn, — the flutes and scallops, and fine, firm lines, all gone; and what was a grace and an ornament to the hills is now a disfigura-

tion. Like worn and unwashed linen appear the remains of that spotless robe with which he clothed the world as his bride.

But he will not abdicate without a struggle. Day after day he rallies his scattered forces, and night after night pitches his white tents on the hills, and would fain regain his lost ground; but the young prince in every encounter prevails. Slowly and reluctantly the gray old hero retreats up the mountain, till finally the south rain comes in earnest, and in a night he is dead.

OUR RURAL DIVINITY

I WONDER that Wilson Flagg did not include the cow among his "Picturesque Animals," for that is where she belongs. She has not the classic beauty of the horse, but in picture-making qualities she is far ahead of him. Her shaggy, loose-jointed body; her irregular, sketchy outlines, like those of the landscape, — the hollows and ridges, the slopes and prominences; her tossing horns, her bushy tail, her swinging gait, her tranquil, ruminating habits, — all tend to make her an object upon which the artist eye loves to dwell. The artists are forever putting her into pictures, too. In rural landscape scenes she is an important feature. Behold her grazing in the pastures and on the hillsides, or along banks of streams, or ruminating under wide-spreading trees, or standing belly-deep in the creek or pond, or lying upon the smooth places in the quiet summer afternoon, the day's grazing done, and waiting to be summoned home to be milked; and again in the twilight lying upon the level summit of the hill, or where the sward is thickest and softest; or in winter a herd of them filing along toward the spring to drink, or being "foddered" from the stack in the field upon the new snow, — surely the cow is a picturesque animal, and all her goings and comings are pleasant to behold.

I looked into Hamerton's clever book on the domestic animals also, expecting to find my divinity duly

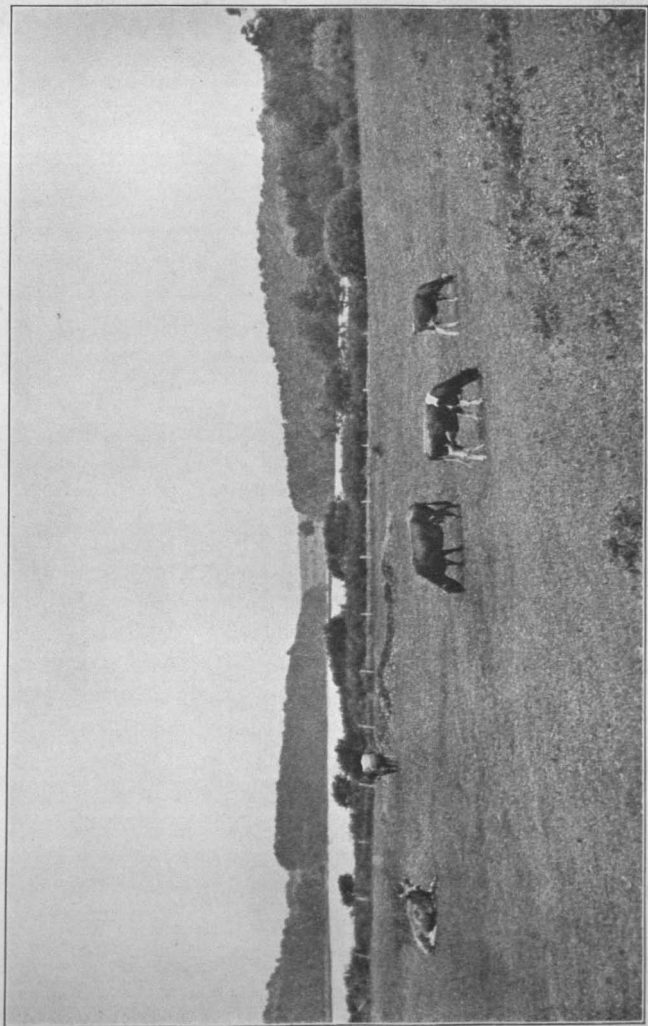
celebrated, but he passes her by and contemplates the bovine qualities only as they appear in the ox and the bull.

Neither have the poets made much of the cow, but have rather dwelt upon the steer, or the ox yoked to the plow. I recall this touch from Emerson:—

“The heifer that lows in the upland farm,
Far heard, lows not thine ear to charm.”

But the ear is charmed, nevertheless, especially if it be not too near, and the air be still and dense, or hollow, as the farmer says. And again, if it be springtime and she task that powerful bellows of hers to its utmost capacity, how round the sound is, and how far it goes over the hills!

The cow has at least four tones or lows. First, there is her alarmed or distressed low when deprived of her calf, or when separated from her mates, — her low of affection. Then there is her call of hunger, a petition for food, sometimes full of impatience, or her answer to the farmer's call, full of eagerness. Then there is that peculiar frenzied bawl she utters on smelling blood, which causes every member of the herd to lift its head and hasten to the spot, — the native cry of the clan. When she is gored or in great danger she bawls also, but that is different. And lastly, there is the long, sonorous volley she lets off on the hills or in the yard, or along the highway, and which seems to be expressive of a kind of unrest and vague longing, — the longing of the imprisoned Io for her lost identity. She sends her voice forth so that every god on Mount Olympus can hear her



GRAZING COWS

plaint. She makes this sound in the morning, especially in the spring, as she goes forth to graze.

One of our rural poets, Myron Benton, whose verse often has the flavor of sweet cream, has written some lines called "Rumination," in which the cow is the principal figure, and with which I am permitted to adorn my theme. The poet first gives his attention to a little brook that "breaks its shallow gossip" at his feet and "drowns the oriole's voice:" —

"But moveth not that wise and ancient cow,
 Who chews her juicy cud so languid now
 Beneath her favorite elm, whose drooping bough
 Lulls all but inward vision fast asleep:
 But still, her tireless tail a pendulum sweep
 Mysterious clock-work guides, and some hid pulley
 Her drowsy cud, each moment, raises duly.

"Of this great, wondrous world she has seen more
 Than you, my little brook, and cropped its store
 Of succulent grass on many a mead and lawn;
 And strayed to distant uplands in the dawn.
 And she has had some dark experience
 Of graceless man's ingratitude; and hence
 Her ways have not been ways of pleasantness,
 Nor all her paths of peace. But her distress
 And grief she has lived past; your giddy round
 Disturbs her not, for she is learned profound
 In deep brahminical philosophy.
 She chews the cud of sweetest reverie
 Above your worldly prattle, brooklet merry,
 Oblivious of all things sublunary."

The cow figures in Grecian mythology, and in the Oriental literature is treated as a sacred animal. "The clouds are cows and the rain milk." I remember what

Herodotus says of the Egyptians' worship of heifers and steers; and in the traditions of the Celtic nations the cow is regarded as a divinity. In Norse mythology the milk of the cow Andhumbla afforded nourishment to the Frost giants, and it was she that licked into being and into shape a god, the father of Odin. If anything could lick a god into shape, certainly the cow could do it. You may see her perform this office for young Taurus any spring. She licks him out of the fogs and bewilderments and uncertainties in which he finds himself on first landing upon these shores, and up on to his feet in an incredibly short time. Indeed, that potent tongue of hers can almost make the dead alive any day, and the creative lick of the old Scandinavian mother cow is only a large-lettered rendering of the commonest facts.

The horse belongs to the fiery god Mars. He favors war, and is one of its oldest, most available, and most formidable engines. The steed is clothed with thunder, and smells the battle from afar; but the cattle upon a thousand hills denote that peace and plenty bears sway in the land. The neighing of the horse is a call to battle; but the lowing of old Brockleface in the valley brings the golden age again. The savage tribes are never without the horse; the Scythians are all mounted; but the cow would tame and humanize them. When the Indians will cultivate the cow, I shall think their civilization fairly begun. Recently, when the horses were sick with the epizoötic, and the oxen came to the city and helped to do their work, what an Arcadian air again filled the streets! But the dear old oxen, — how awkward and distressed they looked! Juno wept in the face of every

one of them. The horse is a true citizen, and is entirely at home in the paved streets; but the ox, — what a complete embodiment of all rustic and rural things! Slow, deliberate, thick-skinned, powerful, hulky, ruminating, fragrant-breathed, when he came to town the spirit and suggestion of all Georgics and Bucolics came with him. O citizen, was it only a plodding, unsightly brute that went by? Was there no chord in your bosom, long silent, that sweetly vibrated at the sight of that patient Herculean couple? Did you smell no hay or cropped herbage, see no summer pastures with circles of cool shade, hear no voice of herds among the hills? They were very likely the only horses your grandfather ever had. Not much trouble to harness and unharness them. Not much vanity on the road in those days. They did all the work on the early pioneer farm. They were the gods whose rude strength first broke the soil. They could live where the moose and the deer could. If there was no clover or timothy to be had, then the twigs of the basswood and birch would do. Before there were yet fields given up to grass, they found ample pasturage in the woods. Their wide-spreading horns gleamed in the duskiess, and their paths and the paths of the cows became the future roads and highways, or even the streets of great cities.

All the descendants of Odin show a bovine trace, and cherish and cultivate the cow. In Norway she is a great feature. Professor Boyesen describes what he calls the *sæter*, the spring migration of the dairy and dairymaids, with all the appurtenances of butter and cheese making, from the valleys to the distant plains upon the moun-

tains, where the grass keeps fresh and tender till fall. It is the great event of the year in all the rural districts. Nearly the whole family go with the cattle and remain with them. At evening the cows are summoned home with a long horn, called the *loor*, in the hands of the milkmaid. The whole herd comes winding down the mountain-side toward the *sæter* in obedience to the mellow blast.

What were those old Vikings but thick-hided bulls that delighted in nothing so much as goring each other? And has not the charge of beefiness been brought much nearer home to us than that? But about all the northern races there is something that is kindred to cattle in the best sense, — something in their art and literature that is essentially pastoral, sweet-breathed, continent, dispassionate, ruminating, wide-eyed, soft-voiced, — a charm of kine, the virtue of brutes.

The cow belongs more especially to the northern peoples, to the region of the good, green grass. She is the true *grazing* animal. That broad, smooth, always dewy nose of hers is just the suggestion of greensward. She caresses the grass; she sweeps off the ends of the leaves; she reaps it with the soft sickle of her tongue. She crops close, but she does not bruise or devour the turf like the horse. She is the sward's best friend, and will make it thick and smooth as a carpet.

“The turfey mountains where live the nibbling sheep”

are not for her. Her muzzle is too blunt; then she does not *bite* as do the sheep; she has no upper teeth; she *crops*. But on the lower slopes, and margins, and rich

bottoms, she is at home. Where the daisy and the buttercup and clover bloom, and where corn will grow, is her proper domain. The agriculture of no country can long thrive without her. Not only a large part of the real, but much of the potential, wealth of the land is wrapped up in her.

Then the cow has given us some good words and hints. How could we get along without the parable of the cow that gave a good pail of milk and then kicked it over? One could hardly keep house without it. Or the parable of the cream and the skimmed milk, or of the buttered bread? We know, too, through her aid, what the horns of the dilemma mean, and what comfort there is in the juicy cud of reverie.

I have said the cow has not been of much service to the poets, and yet I remember that Jean Ingelow could hardly have managed her "High Tide" without "White-foot" and "Lightfoot": and "Cusha! Cusha! Cusha! calling;" or Trowbridge his "Evening at the Farm," in which the real call of the American farm-boy of "Co', boss! Co', boss! Co', Co'," makes a very musical refrain.

Tennyson's charming "Milking Song" is another flower of poesy that has sprung up in my divinity's footsteps.

What a variety of individualities a herd of cows presents when you have come to know them all, not only in form and color, but in manners and disposition! Some are timid and awkward, and the butt of the whole herd. Some remind you of deer. Some have an expression in the face like certain persons you have known

A petted and well-fed cow has a benevolent and gracious look; an ill-used and poorly fed one, a pitiful and forlorn look. Some cows have a masculine or ox expression; others are extremely feminine. The latter are the ones for milk. Some cows will kick like a horse; some jump fences like deer. Every herd has its ringleader, its unruly spirit, — one that plans all the mischief, and leads the rest through the fences into the grain or into the orchard. This one is usually quite different from the master spirit, the “boss of the yard.” The latter is generally the most peaceful and law-abiding cow in the lot, and the least bullying and quarrelsome. But she is not to be trifled with; her will is law; the whole herd give way before her, those that have crossed horns with her and those that have not, but yielded their allegiance without crossing. I remember such a one among my father’s milkers when I was a boy, — a slender-horned, deep-shouldered, large-uddered, dewlapped old cow that we always put first in the long stable, so she could not have a cow on each side of her to forage upon; for the master is yielded to no less in the stanchions than in the yard. She always had the first place anywhere. She had her choice of standing-room in the milking-yard, and when she wanted to lie down there or in the fields the best and softest spot was hers. When the herd were foddered from the stack or barn, or fed with pumpkins in the fall, she was always first served. Her demeanor was quiet but impressive. She never bullied or gored her mates, but literally ruled them with the breath of her nostrils. If any new-comer or ambitious younger cow, however, chafed under her supremacy, she was ever

ready to make good her claims. And with what spirit she would fight when openly challenged! She was a whirlwind of pluck and valor; and not after one defeat or two defeats would she yield the championship. The boss cow, when overcome, seems to brood over her disgrace, and day after day will meet her rival in fierce combat.

A friend of mine, a pastoral philosopher, whom I have consulted in regard to the master cow, thinks it is seldom the case that one rules all the herd, if it number many, but that there is often one that will rule nearly all. "Curiously enough," he says, "a case like this will often occur: No. 1 will whip No. 2; No. 2 whips No. 3; and No. 3 whips No. 1; so around in a circle. This is not a mistake; it is often the case. I remember," he continued, "we once had feeding out of a large bin in the centre of the yard six cows who mastered right through in succession from No. 1 to No. 6; *but No. 6 paid off the score by whipping No. 1.* I often watched them when they were all trying to feed out of the box, and of course trying, dog-in-the-manger fashion, each to prevent any other she could. They would often get in the order to do it very systematically, since they could keep rotating about the box till the chain happened to get broken somewhere, when there would be confusion. Their mastership, you know, like that between nations, is constantly changing. There are always Napoleons who hold their own through many vicissitudes; but the ordinary cow is continually liable to lose her foothold. Some cow she has always despised, and has often sent tossing across the yard at her horns' ends, some pleasant

morning will return the compliment and pay off old scores."

But my own observation has been that, in herds in which there have been no important changes for several years, the question of might gets pretty well settled, and some one cow becomes the acknowledged ruler.

The bully of the yard is never the master, but usually a second or third rate pusher that never loses an opportunity to hook those beneath her, or to gore the masters if she can get them in a tight place. If such a one can get loose in the stable, she is quite certain to do mischief. She delights to pause in the open bars and turn and keep those behind her at bay till she sees a pair of threatening horns pressing toward her, when she quickly passes on. As one cow masters all, so there is one cow that is mastered by all. These are the two extremes of the herd, the head and the tail. Between them are all grades of authority, with none so poor but hath some poorer to do her reverence.

The cow has evidently come down to us from a wild or semi-wild state; perhaps is a descendant of those wild, shaggy cattle of which a small band is still preserved in some nobleman's park in Scotland. Cuvier seems to have been of this opinion. One of the ways in which her wild instincts still crop out is the disposition she shows in spring to hide her calf, — a common practice among the wild herds. Her wild nature would be likely to come to the surface at this crisis if ever; and I have known cows that practiced great secrecy in dropping their calves. As their time approached, they grew restless, a wild and excited look was upon them; and if

left free, they generally set out for the woods, or for some other secluded spot. After the calf is several hours old, and has got upon its feet and had its first meal, the dam by some sign commands it to lie down and remain quiet while she goes forth to feed. If the calf is approached at such time; it plays "possum," pretends to be dead or asleep, till, on finding this ruse does not succeed, it mounts to its feet, bleats loudly and fiercely, and charges desperately upon the intruder. But it recovers from this wild scare in a little while, and never shows signs of it again.

The habit of the cow, also, in eating the placenta, looks to me like a vestige of her former wild instincts, — the instinct to remove everything that would give the wild beasts a clew or a scent, and so attract them to her helpless young.

How wise and sagacious the cows become that run upon the street, or pick their living along the highway! The mystery of gates and bars is at last solved to them. They ponder over them by night, they lurk about them by day, till they acquire a new sense, — till they become *en rapport* with them and know when they are open and unguarded. The garden gate, if it open into the highway at any point, is never out of the mind of these roadsters, or out of their calculations. They calculate upon the chances of its being left open a certain number of times in the season; and if it be but once, and only for five minutes, your cabbage and sweet corn suffer. What villager, or countryman either, has not been awakened at night by the squeaking and crunching of those piratical jaws under the window, or in the direc-

tion of the vegetable patch? I have had the cows, after they had eaten up my garden, break into the stable where my own milcher was tied, and gore her and devour her meal. Yes, life presents but one absorbing problem to the street cow, and that is how to get into your garden. She catches glimpses of it over the fence or through the pickets, and her imagination or epigastrium is inflamed. When the spot is surrounded by a high board fence, I think I have seen her peeping at the cabbages through a knothole. At last she learns to open the gate. It is a great triumph of bovine wit. She does it with her horn or her nose, or maybe with her ever-ready tongue. I doubt if she has ever yet penetrated the mystery of the newer patent fastenings; but the old-fashioned thumb-latch she can see through, give her time enough.

A large, lank, muley or polled cow used to annoy me in this way when I was a dweller in a certain pastoral city. I more than half suspected she was turned in by some one; so one day I watched. Presently I heard the gate-latch rattle; the gate swung open, and in walked the old buffalo. On seeing me she turned and ran like a horse. I then fastened the gate on the inside and watched again. After long waiting the old cow came quickly round the corner and approached the gate. She lifted the latch with her nose. Then, as the gate did not move, she lifted it again and again. Then she gently nudged it. Then, the obtuse gate not taking the hint, she butted it gently, then harder and still harder, till it rattled again. At this juncture I emerged from my hiding-place, when the old villain scampered off with

great precipitation. She knew she was trespassing, and she had learned that there were usually some swift penalties attached to this pastime.

I have owned but three cows and loved but one. That was the first one, Chloe, a bright-red, curly-pated, golden-skinned Devonshire cow, that an ocean steamer landed for me upon the banks of the Potomac one bright May Day many clover summers ago. She came from the north, from the pastoral regions of the Catskills, to graze upon the broad commons of the national capital. I was then the fortunate and happy lessee of an old place with an acre of ground attached, almost within the shadow of the dome of the Capitol. Behind a high but aged and decrepit board fence I indulged my rural and unclerical tastes. I could look up from my homely tasks and cast a potato almost in the midst of that cataract of marble steps that flows out of the north wing of the patriotic pile. Ah! when that creaking and sagging back gate closed behind me in the evening, I was happy; and when it opened for my egress thence in the morning, I was not happy. Inside that gate was a miniature farm, redolent of homely, primitive life, a tumble-down house and stables and implements of agriculture and horticulture, broods of chickens, and growing pumpkins, and a thousand antidotes to the weariness of an artificial life. Outside of it were the marble and iron palaces, the paved and blistering streets, and the high, vacant mahogany desk of a government clerk. In that ancient inclosure I took an earth bath twice a day. I planted myself as deep in the soil as I could, to restore the normal tone and freshness of my system, impaired by the above-

mentioned government mahogany. I have found there is nothing like the earth to draw the various social distempers out of one. The blue devils take flight at once if they see you mean to bury them and make compost of them. Emerson intimates that the scholar had better not try to have two gardens; but I could never spend an hour hoeing up dock and red-root and twitch-grass without in some way getting rid of many weeds and fungi, unwholesome growths, that a petty indoor life is forever fostering in my moral and intellectual nature.

But the finishing touch was not given till Chloe came. She was the jewel for which this homely setting waited. My agriculture had some object then. The old gate never opened with such alacrity as when she paused before it. How we waited for her coming! Should I send Drewer, the colored patriarch, for her? No; the master of the house himself should receive Juno at the capital.

“One cask for you,” said the clerk, referring to the steamer bill of lading.

“Then I hope it’s a cask of milk,” I said. “I expected a cow.”

“One cask, it says here.”

“Well, let’s see it; I’ll warrant it has horns and is tied by a rope;” which proved to be the case, for there stood the only object that bore my name, chewing its cud, on the forward deck. How she liked the voyage I could not find out; but she seemed to relish so much the feeling of solid ground beneath her feet once more, that she led me a lively step all the way home. She cut

capers in front of the White House, and tried twice to wind me up in the rope as we passed the Treasury. She kicked up her heels on the broad avenue, and became very coltish as she came under the walls of the Capitol. But that night the long-vacant stall in the old stable was filled, and the next morning the coffee had met with a change of heart. I had to go out twice with the lantern and survey my treasure before I went to bed. Did she not come from the delectable mountains, and did I not have a sort of filial regard for her as toward my foster-mother?

This was during the Arcadian age at the capital, before the easy-going Southern ways had gone out and the prim new Northern ways had come in, and when the domestic animals were treated with distinguished consideration and granted the freedom of the city. There was a charm of cattle in the street and upon the commons; goats cropped your rose-bushes through the pickets, and nooned upon your front porch; and pigs dreamed Arcadian dreams under your garden fence, or languidly frescoed it with pigments from the nearest pool. It was a time of peace; it was the poor man's golden age. Your cow, your goat, your pig, led vagrant, wandering lives, and picked up a subsistence wherever they could, like the bees, which was almost everywhere. Your cow went forth in the morning and came home fraught with milk at night, and you never troubled yourself where she went or how far she roamed.

Chloe took very naturally to this kind of life. At first I had to go with her a few times and pilot her to the nearest commons, and then I left her to her own wit,

which never failed her. What adventures she had, what acquaintances she made, how far she wandered, I never knew. I never came across her in my walks or rambles. Indeed, on several occasions I thought I would look her up and see her feeding in national pastures, but I never could find her. There were plenty of cows, but they were all strangers. But punctually, between four and five o'clock in the afternoon, her white horns would be seen tossing above the gate and her impatient low be heard. Sometimes, when I turned her forth in the morning, she would pause and apparently consider which way she would go. Should she go toward Kendall Green to-day, or follow the Tiber, or over by the Big Spring, or out around Lincoln Hospital? She seldom reached a conclusion till she had stretched forth her neck and blown a blast on her trumpet that awoke the echoes in the very lantern on the dome of the Capitol. Then, after one or two licks, she would disappear around the corner. Later in the season, when the grass was parched or poor on the commons, and the corn and cabbage tempting in the garden, Chloe was loath to depart in the morning, and her deliberations were longer than ever, and very often I had to aid her in coming to a decision.

For two summers she was a wellspring of pleasure and profit in my farm of one acre, when, in an evil moment, I resolved to part with her and try another. In an evil moment I say, for from that time my luck in cattle left me. The goddess never forgave me the execution of that rash and cruel resolve.

The day is indelibly stamped on my memory when I exposed my Chloe for sale in the public market-place.

It was in November, a bright, dreamy, Indian summer day. A sadness oppressed me, not unmixed with guilt and remorse. An old Irish woman came to the market also with her pets to sell, a sow and five pigs, and took up a position next to me. We condoled with each other; we bewailed the fate of our darlings together; we berated in chorus the white-aproned but blood-stained fraternity who prowled about us. When she went away for a moment I minded the pigs, and when I strolled about she minded my cow. How shy the innocent beast was of those carnal marketmen! How she would shrink away from them! When they put out a hand to feel her condition she would "scrooch" down her back, or bend this way or that, as if the hand were a branding-iron. So long as I stood by her head she felt safe — deluded creature! — and chewed the cud of sweet content; but the moment I left her side she seemed filled with apprehension, and followed me with her eyes, lowing softly and entreatingly till I returned.

At last the money was counted out for her, and her rope surrendered to the hand of another. How that last look of alarm and incredulity, which I caught as I turned for a parting glance, went to my heart!

Her stall was soon filled, or partly filled, and this time with a native, — a specimen of what may be called the cornstalk breed of Virginia; a slender, furtive, long-eared heifer just verging on cowhood, that in spite of my best efforts would wear a pinched and hungry look. She evidently inherited a humped back. It was a family trait, and evidence of the purity of her blood. For the native blooded cow of Virginia, from

shivering over half rations of cornstalks in the open air during those bleak and windy winters, and roaming over those parched fields in summer, has come to have some marked features. For one thing, her pedal extremities seem lengthened; for another, her udder does not impede her traveling; for a third, her backbone inclines strongly to the curve; then, she despiseth hay. This last is a sure test. Offer a thoroughbred Virginia cow hay, and she will laugh in your face; but rattle the husks or shucks, and she knows you to be her friend.

The new-comer even declined corn-meal at first. She eyed it furtively, then sniffed it suspiciously, but finally discovered that it bore some relation to her native "shucks," when she fell to eagerly.

I cherish the memory of this cow, however, as the most affectionate brute I ever knew. Being deprived of her calf, she transferred her affections to her master, and would fain have made a calf of him, lowing in the most piteous and inconsolable manner when he was out of her sight, hardly forgetting her grief long enough to eat her meal, and entirely neglecting her beloved husks. Often in the middle of the night she would set up that sonorous lamentation, and continue it till sleep was chased from every eye in the household. This generally had the effect of bringing the object of her affection before her, but in a mood anything but filial or comforting. Still, at such times a kick seemed a comfort to her, and she would gladly have kissed the rod that was the instrument of my midnight wrath.

But her tender star was destined soon to a fatal eclipse. Being tied with too long a rope on one occasion

during my temporary absence, she got her head into the meal-barrel, and stopped not till she had devoured nearly half a bushel of dry meal. The singularly placid and benevolent look that beamed from the meal-be-smear'd face when I discovered her was something to be remembered. For the first time, also, her spinal column came near assuming a horizontal line.

But the grist proved too much for her frail mill, and her demise took place on the third day, not of course without some attempt to relieve her on my part. I gave her, as is usual in such emergencies, everything I "could think of," and everything my neighbors could think of, besides some fearful prescriptions which I obtained from a German veterinary surgeon, but to no purpose. I imagined her poor maw distended and inflamed with the baking sodden mass which no physic could penetrate or enliven.

Thus ended my second venture in live-stock. My third, which followed sharp upon the heels of this disaster, was scarcely more of a success. This time I led to the altar a buffalo cow, as they call the "muley" down South, — a large, spotted, creamy-skinned cow, with a fine udder, that I persuaded a Jew drover to part with for ninety dollars. "Pag like a dish rack (rag)," said he, pointing to her udder after she had been milked. "You vill come pack and gif me the udder ten tollar" (for he had demanded an even hundred), he continued, "after you have had her a gouple of days." True, I felt like returning to him after a "gouple of days," but not to pay the other ten dollars. The cow proved to be as blind as a bat, though capable of counterfeiting the act

of seeing to perfection. For did she not lift up her head and follow with her eyes a dog that scaled the fence and ran through the other end of the lot, and the next moment dash my hopes thus raised by trying to walk over a locust-tree thirty feet high? And when I set the bucket before her containing her first mess of meal, she missed it by several inches, and her nose brought up against the ground. Was it a kind of far-sightedness and near blindness? That was it, I think; she had genius, but not talent; she could see the man in the moon, but was quite oblivious to the man immediately in her front. Her eyes were telescopic and required a long range.

As long as I kept her in the stall, or confined to the inclosure, this strange eclipse of her sight was of little consequence. But when spring came, and it was time for her to go forth and seek her livelihood in the city's waste places, I was embarrassed. Into what remote corners or into what *terra incognita* might she not wander! There was little doubt but that she would drift around home in the course of the summer, or perhaps as often as every week or two; but could she be trusted to find her way back every night? Perhaps she could be taught. Perhaps her other senses were acute enough to compensate in a measure for her defective vision. So I gave her lessons in the topography of the country. I led her forth to graze for a few hours each day and led her home again. Then I left her to come home alone, which feat she accomplished very encouragingly. She came feeling her way along, stepping very high, but apparently a most diligent and interested sight-seer.

But she was not sure of the right house when she got to it, though she stared at it very hard.

Again I turned her forth, and again she came back, her telescopic eyes apparently of some service to her. On the third day, there was a fierce thunder-storm late in the afternoon, and old Buffalo did not come home. It had evidently scattered and bewildered what little wits she had. Being barely able to navigate those streets on a calm day, what could she be expected to do in a tempest?

After the storm had passed, and near sundown, I set out in quest of her, but could get no clew. I heard that two cows had been struck by lightning about a mile out on the commons. My conscience instantly told me that one of them was mine. It would be a fit closing of the third act of this pastoral drama. Thitherward I bent my steps, and there upon the smooth plain I beheld the scorched and swollen forms of two cows slain by thunderbolts, but neither of them had ever been mine.

The next day I continued the search, and the next, and the next. Finally I hoisted an umbrella over my head, for the weather had become hot, and set out deliberately and systematically to explore every foot of open common on Capitol Hill. I tramped many miles, and found every man's cow but my own, — some twelve or fifteen hundred, I should think. I saw many vagrant boys and Irish and colored women, nearly all of whom had seen a buffalo cow that very day that answered exactly to my description, but in such diverse and widely separate places that I knew it was no cow of mine. And it was astonishing how many times I was

myself deceived; how many rumps or heads, or line backs or white flanks, I saw peeping over knolls, or from behind fences or other objects, that could belong to no cow but mine!

Finally I gave up the search, concluded the cow had been stolen, and advertised her, offering a reward. But days passed, and no tidings were obtained. Hope began to burn pretty low, — was indeed on the point of going out altogether, — when one afternoon, as I was strolling over the commons (for in my walks I still hovered about the scenes of my lost milcher), I saw the rump of a cow, over a grassy knoll, that looked familiar. Coming nearer, the beast lifted up her head; and, behold! it was she! only a few squares from home, where doubtless she had been most of the time. I had overshot the mark in my search. I had ransacked the far-off, and had neglected the near-at-hand, as we are so apt to do. But she was ruined as a milcher, and her history thenceforward was brief and touching!

STRAWBERRIES

WAS it old Dr. Parr who said or sighed in his last illness, "Oh, if I can only live till strawberries come!" The old scholar imagined that, if he could weather it till then, the berries would carry him through. No doubt he had turned from the drugs and the nostrums, or from the hateful food, to the memory of the pungent, penetrating, and unspeakably fresh quality of the strawberry with the deepest longing. The very thought of these crimson lobes, embodying as it were the first glow and ardor of the young summer, and with their power to unsheathe the taste and spur the flagging appetite, made life seem possible and desirable to him.

The strawberry is always the hope of the invalid, and sometimes, no doubt, his salvation. It is the first and finest relish among fruits, and well merits Dr. Boteler's memorable saying, that "doubtless God could have made a better berry, but doubtless God never did."

On the threshold of summer, Nature proffers us this her virgin fruit; more rich and sumptuous are to follow, but the wild delicacy and fillip of the strawberry are never repeated, — that keen feathered edge greets the tongue in nothing else.

Let me not be afraid of overpraising it, but probe and probe for words to hint its surprising virtues. We may well celebrate it with festivals and music. It has that indescribable quality of all first things, — that shy,

uncloying, provoking barbed sweetness. It is eager and sanguine as youth. It is born of the copious dews, the fragrant nights, the tender skies, the plentiful rains of the early season. The singing of birds is in it, and the health and frolic of lusty Nature. It is the product of liquid May touched by the June sun. It has the tartness, the briskness, the unruliness of spring, and the aroma and intensity of summer.

Oh, the strawberry days! how vividly they come back to one! The smell of clover in the fields, of blooming rye on the hills, of the wild grape beside the woods, and of the sweet honeysuckle and the spiræa about the house. The first hot, moist days. The daisies and the buttercups; the songs of the birds, their first reckless jollity and love-making over; the full tender foliage of the trees; the bees swarming, and the air strung with resonant musical chords. The time of the sweetest and most succulent grass, when the cows come home with aching udders. Indeed, the strawberry belongs to the juiciest time of the year.

What a challenge it is to the taste! how it bites back again! and is there any other sound like the snap and crackle with which it salutes the ear on being plucked from the stems? It is a threat to one sense that the other is soon to verify. It snaps to the ear as it smacks to the tongue. All other berries are tame beside it.

The plant is almost an evergreen; it loves the coverlid of the snow, and will keep fresh through the severest winters with a slight protection. The frost leaves its virtues in it. The berry is a kind of vegetable snow. How cool, how tonic, how melting, and how perishable! It

is almost as easy to keep frost. Heat kills it, and sugar quickly breaks up its cells.

Is there anything like the odor of strawberries? The next best thing to tasting them is to smell them; one may put his nose to the dish while the fruit is yet too rare and choice for his fingers. Touch not and taste not, but take a good smell and go mad! Last fall I potted some of the Downer, and in the winter grew them in the house. In March the berries were ripe, only four or five on a plant, just enough, all told, to make one consider whether it were not worth while to kill off the rest of the household, so that the berries need not be divided. But if every tongue could not have a feast, every nose banqueted daily upon them. They filled the house with perfume. The Downer is remarkable in this respect. Grown in the open field, it surpasses in its odor any strawberry of my acquaintance. And it is scarcely less agreeable to the taste. It is a very beautiful berry to look upon, round, light pink, with a delicate, fine-grained expression. Some berries shine, the Downer glows as if there were a red bloom upon it. Its core is firm and white, its skin thin and easily bruised, which makes it a poor market berry, but, with its high flavor and productiveness, an admirable one for home use. It seems to be as easily grown as the Wilson, while it is much more palatable. The great trouble with the Wilson, as everybody knows, is its rank acidity. When it first comes, it is difficult to eat it without making faces. It is crabbed and acrimonious. Like some persons, the Wilson will not ripen and sweeten till its old age. Its largest and finest crop, if allowed to remain on the

vines, will soften and fail unregenerated, or with all its sins upon it. But wait till toward the end of the season, after the plant gets over its hurry and takes time to ripen its fruit. The berry will then face the sun for days, and, if the weather is not too wet, instead of softening will turn dark and grow rich. Out of its crabbedness and spitefulness come the finest, choicest flavors. It is an astonishing berry. It lays hold of the taste in a way that the aristocratic berries, like the *Jocunda* or the *Triumph*, cannot approximate to. Its quality is as penetrating as that of ants and wasps, but sweet. It is, indeed, a wild bee turned into a berry, with the sting mollified and the honey disguised. A quart of these rare-ripes I venture to say contains more of the peculiar virtue and excellence of the strawberry kind than can be had in twice the same quantity of any other cultivated variety. Take these berries in a bowl of rich milk with some bread, — ah, what a dish! — too good to set before a king! I suspect this was the food of Adam in Paradise, only Adam did not have the *Wilson* strawberry; he had the wild strawberry that Eve plucked in their hill-meadow and “hulled” with her own hands, and that, take it all in all, even surpasses the late-ripened *Wilson*.

Adam is still extant in the taste and the appetite of most country boys; lives there a country boy who does not like wild strawberries and milk, — yea, prefer it to any other known dish? I am not thinking of a dessert of strawberries and cream; this the city boy may have, too, after a sort; but bread-and-milk, with the addition of wild strawberries, is peculiarly a country dish, and is

to the taste what a wild bird's song is to the ear. When I was a lad, and went afield with my hoe or with the cows, during the strawberry season, I was sure to return at meal-time with a lining of berries in the top of my straw hat. They were my daily food, and I could taste the liquid and gurgling notes of the bobolink in every spoonful of them; and to this day, to make a dinner or supper off a bowl of milk with bread and strawberries, — plenty of strawberries, — well, is as near to being a boy again as I ever expect to come. The golden age draws sensibly near. Appetite becomes a kind of delicious thirst, — a gentle and subtle craving of all parts of the mouth and throat, — and those nerves of taste that occupy, as it were, a back seat, and take little cognizance of grosser foods, come forth, and are played upon and set vibrating. Indeed, I think, if there is ever rejoicing throughout one's alimentary household, — if ever that much-abused servant the stomach says Amen, or those faithful handmaidens the liver and spleen nudge each other delightedly, it must be when one on a torrid summer day passes by the solid and carnal dinner for this simple Arcadian dish.

The wild strawberry, like the wild apple, is spicy and high-flavored, but, unlike the apple, it is also mild and delicious. It has the true rustic sweetness and piquancy. What it lacks in size, when compared with the garden berry, it makes up in intensity. It is never dropsical or overgrown, but firm-fleshed and hardy. Its great enemies are the plow, gypsum, and the horse-rake. It dislikes a limestone soil, but seems to prefer the detritus of the stratified rock. Where the sugar maple abounds,

I have always found plenty of wild strawberries. We have two kinds, — the wood berry and the field berry. The former is as wild as a partridge. It is found in open places in the woods and along the borders, growing beside stumps and rocks, never in abundance, but very sparsely. It is small, cone-shaped, dark red, shiny, and pimply. It looks woody, and tastes so. It has never reached the table, nor made the acquaintance of cream. A quart of them, at a fair price for human labor, would be worth their weight in silver at least. (Yet a careful observer writes me that in certain sections in the western part of New York they are very plentiful.)

Ovid mentions the wood strawberry, which would lead one to infer that they were more abundant in his time and country than in ours.

This is, perhaps, the same as the alpine strawberry, which is said to grow in the mountains of Greece, and thence northward. This was probably the first variety cultivated, though our native species would seem as unpromising a subject for the garden as club-moss or wintergreens.

Of the field strawberry there are a great many varieties, — some growing in meadows, some in pastures, and some upon mountain-tops. Some are round, and stick close to the calyx or hull; some are long and pointed, with long, tapering necks. These usually grow upon tall stems. They are, indeed, of the slim, linear kind. Your corpulent berry keeps close to the ground; its stem and foot-stalk are short, and neck it has none. Its color is deeper than that of its tall brother, and of course it has more juice. You are more apt to find the tall varie-

ties upon knolls in low, wet meadows, and again upon mountain-tops, growing in tussocks of wild grass about the open summits. These latter ripen in July, and give one his last taste of strawberries for the season.

But the favorite haunt of the wild strawberry is an uplying meadow that has been exempt from the plow for five or six years, and that has little timothy and much daisy. When you go a-berrying, turn your steps toward the milk-white meadows. The slightly bitter odor of the daisies is very agreeable to the smell, and affords a good background for the perfume of the fruit. The strawberry cannot cope with the rank and deep-rooted clover, and seldom appears in a field till the clover has had its day. But the daisy with its slender stalk does not crowd or obstruct the plant, while its broad white flower is like a light parasol that tempers and softens the too strong sunlight. Indeed, daisies and strawberries are generally associated. Nature fill§ her dish with the berries, then covers them with the white and yellow of milk and cream, thus suggesting a combination we are quick to follow. Milk alone, after it loses its animal heat, is a clod, and begets torpidity of the brain; the berries lighten it, give wings to it, and one is fed as by the air he breathes or the water he drinks.

Then the delight of "picking" the wild berries! It is one of the fragrant memories of boyhood. Indeed, for boy or man to go a-berrying in a certain pastoral country I know of, where a passer-by along the highway is often regaled by a breeze loaded with a perfume of the o'er-ripe fruit, is to get nearer to June than by almost any course I know of. Your errand is so private

and confidential! You stoop low. You part away the grass and the daisies, and would lay bare the inmost secrets of the meadow. Everything is yet tender and succulent; the very air is bright and new; the warm breath of the meadow comes up in your face; to your knees you are in a sea of daisies and clover; from your knees up, you are in a sea of solar light and warmth. Now you are prostrate like a swimmer, or like a surfbather reaching for pebbles or shells, the white and green spray breaks above you; then, like a devotee before a shrine or naming his beads, your rosary strung with luscious berries; anon you are a grazing Nebuchadnezzar, or an artist taking an inverted view of the landscape.

The birds are alarmed by your close scrutiny of their domain. They hardly know whether to sing or to cry, and do a little of both. The bobolink follows you and circles above and in advance of you, and is ready to give you a triumphal exit from the field, if you will only depart.

“Ye boys that gather flowers and strawberries,
Lo, hid within the grass, an adder lies,”

Warton makes Virgil sing; and Montaigne, in his “Journey to Italy,” says: “The children very often are afraid, on account of the snakes, to go and pick the strawberries that grow in quantities on the mountains and among bushes.” But there is no serpent here, — at worst, only a bumblebee’s or yellow-jacket’s nest. You soon find out the spring in the corner of the field under the beechen tree. While you wipe your brow and thank the Lord for spring water, you glance at the initials in

the bark, some of them so old that they seem runic and legendary. You find out, also, how gregarious the strawberry is, — that the different varieties exist in little colonies about the field. When you strike the outskirts of one of these plantations, how quickly you work toward the centre of it, and then from the centre out, then circumnavigate it, and follow up all its branchings and windings!

Then the delight in the abstract and in the concrete of strolling and lounging about the June meadows; of lying in pickle for half a day or more in this pastoral sea, laved by the great tide, shone upon by the virile sun, drenched to the very marrow of your being with the warm and wooing influences of the young summer!

I was a famous berry-picker when a boy. It was near enough to hunting and fishing to enlist me. Mother would always send me in preference to any of the rest of the boys. I got the biggest berries and the most of them. There was something of the excitement of the chase in the occupation, and something of the charm and preciousness of game about the trophies. The pursuit had its surprises, its expectancies, its sudden disclosures, — in fact, its uncertainties. I went forth adventurously. I could wander free as the wind. Then there were moments of inspiration, for it always seemed a felicitous stroke to light upon a particularly fine spot, as it does when one takes an old and wary trout. You discovered the game where it was hidden. Your genius prompted you. Another had passed that way and had missed the prize. Indeed, the successful berry-picker, like Walton's angler, is born, not made. It is only an-

other kind of angling. In the same field one boy gets big berries and plenty of them ; another wanders up and down, and finds only a few little ones. He cannot see them ; he does not know how to divine them where they lurk under the leaves and vines. The berry-grower knows that in the cultivated patch his pickers are very unequal, the baskets of one boy or girl having so inferior a look that it does not seem possible they could have been filled from the same vines with certain others. But neither blunt fingers nor blunt eyes are hard to find ; and as there are those who can see nothing clearly, so there are those who can touch nothing deftly or gently.

The cultivation of the strawberry is thought to be comparatively modern. The ancients appear to have been a carnivorous race : they gorged themselves with meat ; while the modern man makes larger and larger use of fruits and vegetables, until this generation is doubtless better fed than any that has preceded it. The strawberry and the apple, and such vegetables as celery, ought to lengthen human life, — at least to correct its biliousness and make it more sweet and sanguine.

The first impetus to strawberry culture seems to have been given by the introduction of our field berry (*Fragaria Virginiana*) into England in the seventeenth century, though not much progress was made till the eighteenth. This variety is much more fragrant and aromatic than the native berry of Europe, though less so in that climate than when grown here. Many new seedlings sprang from it, and it was the prevailing berry in English and French gardens, says Fuller, until the South American species, *grandiflora*, was introduced and sup-

planted it. This berry is naturally much larger and sweeter, and better adapted to the English climate, than our *Virginiana*. Hence the English strawberries of to-day surpass ours in these respects, but are wanting in that aromatic pungency that characterizes most of our berries.

The *Jocunda*, *Triumph*, *Victoria*, are foreign varieties of the *Grandiflora* species; while the *Hovey*, the *Boston Pine*, the *Downer*, are natives of this country.

The strawberry, in the main, repeats the form of the human heart, and perhaps of all the small fruits known to man none other is so deeply and fondly cherished, or hailed with such universal delight, as this lowly but youth-renewing berry.

SPECKLED TROUT

I

THE legend of the wary trout, hinted at in the last sketch, is to be further illustrated in this and some following chapters. We shall get at more of the meaning of those dark water-lines, and I hope, also, not entirely miss the significance of the gold and silver spots and the glancing iridescent hues. The trout is dark and obscure above, but behind this foil there are wondrous tints that reward the believing eye. Those who seek him in his wild, remote haunts are quite sure to get the full force of the sombre and uninviting aspects, — the wet, the cold, the toil, the broken rest, and the huge, savage, uncompromising nature, — but the true angler sees farther than these, and is never thwarted of his legitimate reward by them.

I have been a seeker of trout from my boyhood, and on all the expeditions in which this fish has been the ostensible purpose I have brought home more game than my creel showed. In fact, in my mature years I find I got more of nature into me, more of the woods, the wild, nearer to bird and beast, while threading my native streams for trout, than in almost any other way. It furnished a good excuse to go forth; it pitched one in the right key; it sent one through the fat and marrowy places of field and wood. Then the fisherman has a harmless, preoccupied look; he is a kind of vagrant that

nothing fears. He blends himself with the trees and the shadows. All his approaches are gentle and indirect. He times himself to the meandering, soliloquizing stream; its impulse bears him along. At the foot of the waterfall he sits sequestered and hidden in its volume of sound. The birds know he has no designs upon them, and the animals see that his mind is in the creek. His enthusiasm anneals him, and makes him pliable to the scenes and influences he moves among.

Then what acquaintance he makes with the stream! He addresses himself to it as a lover to his mistress; he woos it and stays with it till he knows its most hidden secrets. It runs through his thoughts not less than through its banks there; he feels the fret and thrust of every bar and boulder. Where it deepens, his purpose deepens; where it is shallow, he is indifferent. He knows how to interpret its every glance and dimple; its beauty haunts him for days.

I am sure I run no risk of overpraising the charm and attractiveness of a well-fed trout stream, every drop of water in it as bright and pure as if the nymphs had brought it all the way from its source in crystal goblets, and as cool as if it had been hatched beneath a glacier. When the heated and soiled and jaded refugee from the city first sees one, he feels as if he would like to turn it into his bosom and let it flow through him a few hours, it suggests such healing freshness and newness. How his roily thoughts would run clear! how the sediment would go downstream! Could he ever have an impure or an unwholesome wish afterward? The next best thing he can do is to tramp along its banks and sur-

render himself to its influence. If he reads it intently enough, he will, in a measure, be taking it into his mind and heart, and experiencing its salutary ministrations.

Trout streams coursed through every valley my boyhood knew. I crossed them, and was often lured and detained by them, on my way to and from school. We bathed in them during the long summer noons, and felt for the trout under their banks. A holiday was a holiday indeed that brought permission to go fishing over on Rose's Brook, or up Hardscrabble, or in Meeker's Hollow,—all-day trips, from morning till night, through meadows and pastures and beechen woods, wherever the shy, limpid stream led. What an appetite it developed! a hunger that was fierce and aboriginal, and that the wild strawberries we plucked as we crossed the hill teased rather than allayed. When but a few hours could be had, gained perhaps by doing some piece of work about the farm or garden in half the allotted time, the little creek that headed in the paternal domain was handy; when half a day was at one's disposal, there were the hemlocks, less than a mile distant, with their loitering, meditative, log-impeded stream and their dusky, fragrant depths. Alert and wide-eyed, one picked his way along, startled now and then by the sudden bursting-up of the partridge, or by the whistling wings of the "dropping snipe," pressing through the brush and the briers, or finding an easy passage over the trunk of a prostrate tree, carefully letting his hook down through some tangle into a still pool, or standing in some high, sombre avenue and watching his line float in and out amid the moss-covered

boulders. In my first essayings I used to go to the edge of these hemlocks, seldom dipping into them beyond the first pool where the stream swept under the roots of two large trees. From this point I could look back into the sunlit fields where the cattle were grazing; beyond, all was gloom and mystery; the trout were black, and to my young imagination the silence and the shadows were blacker. But gradually I yielded to the fascination and penetrated the woods farther and farther on each expedition, till the heart of the mystery was fairly plucked out. During the second or third year of my piscatorial experience I went through them, and through the pasture and meadow beyond, and through another strip of hemlocks, to where the little stream joined the main creek of the valley.

In June, when my trout fever ran pretty high, and an auspicious day arrived, I would make a trip to a stream a couple of miles distant, that came down out of a comparatively new settlement. It was a rapid mountain brook presenting many difficult problems to the young angler, but a very enticing stream for all that, with its two saw-mill dams, its pretty cascades, its high, shelving rocks sheltering the mossy nests of the phoebe-bird, and its general wild and forbidding aspects.

But a meadow brook was always a favorite. The trout like meadows; doubtless their food is more abundant there, and, usually, the good hiding-places are more numerous. As soon as you strike a meadow the character of the creek changes: it goes slower and lies deeper; it tarries to enjoy the high, cool banks and to half hide beneath them; it loves the willows, or rather

the willows love it and shelter it from the sun ; its spring runs are kept cool by the overhanging grass, and the heavy turf that faces its open banks is not cut away by the sharp hoofs of the grazing cattle. Then there are the bobolinks and the starlings and the meadowlarks, always interested spectators of the angler ; there are also the marsh marigolds, the buttercups, or the spotted lilies, and the good angler is always an interested spectator of them. In fact, the patches of meadow land that lie in the angler's course are like the happy experiences in his own life, or like the fine passages in the poem he is reading ; the pasture oftener contains the shallow and monotonous places. In the small streams the cattle scare the fish, and soil their element and break down their retreats under the banks. Woodland alternates the best with meadow : the creek loves to burrow under the roots of a great tree, to scoop out a pool after leaping over the prostrate trunk of one, and to pause at the foot of a ledge of moss-covered rocks, with ice-cold water dripping down. How straight the current goes for the rock ! Note its corrugated, muscular appearance ; it strikes and glances off, but accumulates, deepens with well-defined eddies above and to one side ; on the edge of these the trout lurk and spring upon their prey.

The angler learns that it is generally some obstacle or hindrance that makes a deep place in the creek, as in a brave life ; and his ideal brook is one that lies in deep, well-defined banks, yet makes many a shift from right to left, meets with many rebuffs and adventures, hurled back upon itself by rocks, waylaid by snags and trees, tripped up by precipices, but sooner or later re-

posing under meadow banks, deepening and eddying beneath bridges, or prosperous and strong in some level stretch of cultivated land with great elms shading it here and there.

But I early learned that from almost any stream in a trout country the true angler could take trout, and that the great secret was this, that, whatever bait you used, worm, grasshopper, grub, or fly, there was one thing you must always put upon your hook, namely, your heart: when you bait your hook with your heart the fish always bite; they will jump clear from the water after it; they will dispute with each other over it; it is a morsel they love above everything else. With such bait I have seen the born angler (my grandfather was one) take a noble string of trout from the most unpromising waters, and on the most unpromising day. He used his hook so coyly and tenderly, he approached the fish with such address and insinuation, he divined the exact spot where they lay: if they were not eager, he humored them and seemed to steal by them; if they were playful and coquettish, he would suit his mood to theirs; if they were frank and sincere, he met them halfway; he was so patient and considerate, so entirely devoted to pleasing the critical trout, and so successful in his efforts, — surely his heart was upon his hook, and it was a tender, unctuous heart, too, as that of every angler is. How nicely he would measure the distance! how dexterously he would avoid an overhanging limb or bush and drop the line exactly in the right spot! Of course there was a pulse of feeling and sympathy to the extremity of that line. If your heart is a stone, however, or an empty

husk, there is no use to put it upon your hook; it will not tempt the fish; the bait must be quick and fresh. Indeed, a certain quality of youth is indispensable to the successful angler, a certain unworldliness and readiness to invest yourself in an enterprise that does n't pay in the current coin. Not only is the angler, like the poet, born and not made, as Walton says, but there is a deal of the poet in him, and he is to be judged no more harshly; he is the victim of his genius: those wild streams, how they haunt him! he will play truant to dull care, and flee to them; their waters impart somewhat of their own perpetual youth to him. My grandfather when he was eighty years old would take down his pole as eagerly as any boy, and step off with wonderful elasticity toward the beloved streams; it used to try my young legs a good deal to follow him, specially on the return trip. And no poet was ever more innocent of worldly success or ambition. For, to paraphrase Tennyson, —

“Lusty trout to him were scrip and share,
And babbling waters more than cent for cent.”

He laid up treasures, but they were not in this world. In fact, though the kindest of husbands, I fear he was not what the country people call a “good provider,” except in providing trout in their season, though it is doubtful if there was always fat in the house to fry them in. But he could tell you they were worse off than that at Valley Forge, and that trout, or any other fish, were good roasted in the ashes under the coals. He had the Walton requisite of loving quietness and contemplation,

and was devout withal. Indeed, in many ways he was akin to those Galilee fishermen who were called to be fishers of men. How he read the Book and pored over it, even at times, I suspect, nodding over it, and laying it down only to take up his rod, over which, unless the trout were very dilatory and the journey very fatiguing, he never nodded!

II

The Delaware is one of our minor rivers, but it is a stream beloved of the trout. Nearly all its remote branches head in mountain springs, and its collected waters, even when warmed by the summer sun, are as sweet and wholesome as dew swept from the grass. The Hudson wins from it two streams that are fathered by the mountains from whose loins most of its beginnings issue, namely, the Rondout and the Esopus. These swell a more illustrious current than the Delaware, but the Rondout, one of the finest trout streams in the world, makes an uncanny alliance before it reaches its destination, namely, with the malarious Wallkill.

In the same nest of mountains from which they start are born the Neversink and the Beaverkill, streams of wondrous beauty that flow south and west into the Delaware. From my native hills I could catch glimpses of the mountains in whose laps these creeks were cradled, but it was not till after many years, and after dwelling in a country where trout are not found, that I returned to pay my respects to them as an angler.

My first acquaintance with the Neversink was made in company with some friends in 1869. We passed up the Valley of the Big Ingin, marveling at its copious ice-cold springs, and its immense sweep of heavy-timbered mountain-sides. Crossing the range at its head, we struck the Neversink quite unexpectedly about the middle of the afternoon, at a point where it was a good-sized trout stream. It proved to be one of those black mountain brooks born of innumerable ice-cold springs, nourished in the shade, and shod, as it were, with thick-matted moss, that every camper-out remembers. The fish are as black as the stream and very wild. They dart from beneath the fringed rocks, or dive with the hook into the dusky depths, — an integral part of the silence and the shadows. The spell of the moss is over all. The fisherman's tread is noiseless, as he leaps from stone to stone and from ledge to ledge along the bed of the stream. How cool it is! He looks up the dark, silent defile, hears the solitary voice of the water, sees the decayed trunks of fallen trees bridging the stream, and all he has dreamed, when a boy, of the haunts of beasts of prey — the crouching feline tribes, especially if it be near nightfall and the gloom already deepening in the woods — comes freshly to mind, and he presses on, wary and alert, and speaking to his companions in low tones.

After an hour or so the trout became less abundant, and with nearly a hundred of the black sprites in our baskets we turned back. Here and there I saw the abandoned nests of the pigeons, sometimes half a dozen in one tree. In a yellow birch which the floods had uprooted,

a number of nests were still in place, little shelves or platforms of twigs loosely arranged, and affording little or no protection to the eggs or the young birds against inclement weather.

Before we had reached our companions the rain set in again and forced us to take shelter under a balsam. When it slackened we moved on and soon came up with Aaron who had caught his first trout, and, considerably drenched, was making his way toward camp, which one of the party had gone forward to build. After traveling less than a mile, we saw a smoke struggling up through the dripping trees, and in a few moments were all standing round a blazing fire. But the rain now commenced again, and fairly poured down through the trees, rendering the prospect of cooking and eating our supper there in the woods, and of passing the night on the ground without tent or cover of any kind, rather disheartening. We had been told of a bark shanty a couple of miles farther down the creek, and thitherward we speedily took up our line of march. When we were on the point of discontinuing the search, thinking we had been misinformed or had passed it by, we came in sight of a bark-peeling, in the midst of which a small log house lifted its naked rafters toward the now breaking sky. It had neither floor nor roof, and was less inviting on first sight than the open woods. But a board partition was still standing, out of which we built a rude porch on the east side of the house, large enough for us all to sleep under if well packed, and eat under if we stood up. There was plenty of well-seasoned timber lying about, and a fire was soon burning in front of our quarters that

made the scene social and picturesque, especially when the frying-pans were brought into requisition, and the coffee, in charge of Aaron, who was an artist in this line, mingled its aroma with the wild-wood air. At dusk a balsam was felled, and the tips of the branches used to make a bed, which was more fragrant than soft; hemlock is better, because its needles are finer and its branches more elastic.

There was a spirt or two of rain during the night, but not enough to find out the leaks in our roof. It took the shower or series of showers of the next day to do that. They commenced about two o'clock in the afternoon. The forenoon had been fine, and we had brought into camp nearly three hundred trout; but before they were half dressed, or the first panfuls fried, the rain set in. First came short, sharp dashes, then a gleam of treacherous sunshine, followed by more and heavier dashes. The wind was in the southwest, and to rain seemed the easiest thing in the world. From fitful dashes to a steady pour the transition was natural. We stood huddled together, stark and grim, under our cover, like hens under a cart. The fire fought bravely for a time, and retaliated with sparks and spiteful tongues of flame; but gradually its spirit was broken, only a heavy body of coal and half-consumed logs in the centre holding out against all odds. The simmering fish were soon floating about in a yellow liquid that did not look in the least appetizing. Point after point gave way in our cover, till standing between the drops was no longer possible. The water coursed down the underside of the boards and dripped in our necks and formed puddles

on our hat-brims. We shifted our guns and traps and viands, till there was no longer any choice of position, when the loaves and the fishes, the salt and the sugar, the pork and the butter, shared the same watery fate. The fire was gasping its last. Little rivulets coursed about it, and bore away the quenched but steaming coals on their bosoms. The spring run in the rear of our camp swelled so rapidly that part of the trout that had been hastily left lying on its banks again found themselves quite at home. For over two hours the floods came down. About four o'clock Orville, who had not yet come from the day's sport, appeared. To say Orville was wet is not much; he was better than that, — he had been washed and rinsed in at least half a dozen waters, and the trout that he bore dangling at the end of a string hardly knew that they had been out of their proper element.

But he brought welcome news. He had been two or three miles down the creek, and had seen a log building, — whether house or stable he did not know, but it had the appearance of having a good roof, which was inducement enough for us instantly to leave our present quarters. Our course lay along an old wood-road, and much of the time we were to our knees in water. The woods were literally flooded everywhere. Every little rill and springlet ran like a mill-tail, while the main stream rushed and roared, foaming, leaping, lashing, its volume increased fifty-fold. The water was not roily, but of a rich coffee-color, from the leachings of the woods. No more trout for the next three days! we thought, as we looked upon the rampant stream.

After we had labored and floundered along for about an hour, the road turned to the left, and in a little stumpy clearing near the creek a gable uprose on our view. It did not prove to be just such a place as poets love to contemplate. It required a greater effort of the imagination than any of us were then capable of to believe it had ever been a favorite resort of wood-nymphs or sylvan deities. It savored rather of the equine and the bovine. The bark-men had kept their teams there, horses on the one side and oxen on the other, and no Hercules had ever done duty in cleansing the stables. But there was a dry loft overhead with some straw, where we might get some sleep, in spite of the rain and the midges; a double layer of boards, standing at a very acute angle, would keep off the former, while the mingled refuse hay and muck beneath would nurse a smoke that would prove a thorough protection against the latter. And then, when Jim, the two-handed, mounting the trunk of a prostrate maple near by, had severed it thrice with easy and familiar stroke, and, rolling the logs in front of the shanty, had kindled a fire, which, getting the better of the dampness, soon cast a bright glow over all, shedding warmth and light even into the dingy stable, I consented to unsling my knapsack and accept the situation. The rain had ceased, and the sun shone out behind the woods. We had trout sufficient for present needs; and after my first meal in an ox-stall, I strolled out on the rude log bridge to watch the angry Never-sink rush by. Its waters fell quite as rapidly as they rose, and before sundown it looked as if we might have fishing again on the morrow. We had better sleep

that night than either night before, though there were two disturbing causes, — the smoke in the early part of it, and the cold in the latter. The “no-see-ems” left in disgust; and, though disgusted myself, I swallowed the smoke as best I could, and hugged my pallet of straw the closer. But the day dawned bright, and a plunge in the Neversink set me all right again. The creek, to our surprise and gratification, was only a little higher than before the rain, and some of the finest trout we had yet seen we caught that morning near camp.

We tarried yet another day and night at the old stable, but taking our meals outside squatted on the ground, which had now become quite dry. Part of the day I spent strolling about the woods, looking up old acquaintances among the birds, and, as always, half expectant of making some new ones. Curiously enough, the most abundant species were among those I had found rare in most other localities, namely, the small water-wagtail, the mourning ground warbler, and the yellow-bellied woodpecker. The latter seems to be the prevailing woodpecker through the woods of this region.

That night the midges, those notes that sting, held high carnival. We learned afterward, in the settlement below and from the bark-peelers, that it was the worst night ever experienced in that valley. We had done no fishing during the day, but had anticipated some fine sport about sundown. Accordingly Aaron and I started off between six and seven o'clock, one going up stream and the other down. The scene was charming. The sun shot up great spokes of light from behind the woods, and beauty, like a presence, pervaded the atmosphere.

But torment, multiplied as the sands of the seashore, lurked in every tangle and thicket. In a thoughtless moment I removed my shoes and socks, and waded in the water to secure a fine trout that had accidentally slipped from my string and was helplessly floating with the current. This caused some delay and gave the gnats time to accumulate. Before I had got one foot half dressed I was enveloped in a black mist that settled upon my hands and neck and face, filling my ears with infinitesimal pipings and covering my flesh with infinitesimal bitings. I thought I should have to flee to the friendly fumes of the old stable, with "one stocking off and one stocking on;" but I got my shoe on at last, though not without many amusing interruptions and digressions.

In a few moments after this adventure I was in rapid retreat toward camp. Just as I reached the path leading from the shanty to the creek, my companion in the same ignoble flight reached it also, his hat broken and rumpled, and his sanguine countenance looking more sanguinary than I had ever before seen it, and his speech, also, in the highest degree inflammatory. His face and forehead were as blotched and swollen as if he had just run his head into a hornets' nest, and his manner as precipitate as if the whole swarm was still at his back.

No smoke or smudge which we ourselves could endure was sufficient in the earlier part of that evening to prevent serious annoyance from the same cause; but later a respite was granted us.

About ten o'clock, as we stood round our camp-fire, we were startled by a brief but striking display of the

aurora borealis. My imagination had already been excited by talk of legends and of weird shapes and appearances, and when, on looking up toward the sky, I saw those pale, phantasmal waves of magnetic light chasing each other across the little opening above our heads, and at first sight seeming barely to clear the treetops, I was as vividly impressed as if I had caught a glimpse of a veritable spectre of the Neversink. The sky shook and trembled like a great white curtain.

After we had climbed to our loft and had lain down to sleep, another adventure befell us. This time a new and uninviting customer appeared upon the scene, the *genius loci* of the old stable, namely, the "fretful porcupine." We had seen the marks and work of these animals about the shanty, and had been careful each night to hang our traps, guns, etc., beyond their reach, but of the prickly night-walker himself we feared we should not get a view.

We had lain down some half hour, and I was just on the threshold of sleep, ready, as it were, to pass through the open door into the land of dreams, when I heard outside somewhere that curious sound, — a sound which I had heard every night I spent in these woods, not only on this but on former expeditions, and which I had settled in my mind as proceeding from the porcupine, since I knew the sounds our other common animals were likely to make, — a sound that might be either a gnawing on some hard, dry substance, or a grating of teeth, or a shrill grunting.

Orville heard it also, and, raising up on his elbow, asked, "What is that?"

"What the hunters call a 'porcupig,'" said I.

"Sure?"

"Entirely so."

"Why does he make that noise?"

"It is a way he has of cursing our fire," I replied.
"I heard him last night also."

"Where do you suppose he is?" inquired my companion, showing a disposition to look him up.

"Not far off, perhaps fifteen or twenty yards from our fire. where the shadows begin to deepen."

Orville slipped into his trousers, felt for my gun, and in a moment had disappeared down through the scuttle hole. I had no disposition to follow him, but was rather annoyed than otherwise at the disturbance. Getting the direction of the sound, he went picking his way over the rough, uneven ground, and, when he got where the light failed him, poking every doubtful object with the end of his gun. Presently he poked a light grayish object, like a large round stone, which surprised him by moving off. On this hint he fired, making an incurable wound in the "porcupig," which, nevertheless, tried harder than ever to escape. I lay listening, when, close on the heels of the report of the gun, came excited shouts for a revolver. Snatching up my Smith and Wesson, I hastened, shoeless and hatless, to the scene of action, wondering what was up. I found my companion struggling to detain, with the end of the gun, an uncertain object that was trying to crawl off into the darkness. "Look out!" said Orville, as he saw my bare feet, "the quills are lying thick around here."

And so they were; he had blown or beaten them

nearly all off the poor creature's back, and was in a fair way completely to disable my gun, the ramrod of which was already broken and splintered clubbing his victim. But a couple of shots from the revolver, sighted by a lighted match, at the head of the animal, quickly settled him.

He proved to be an unusually large Canada porcupine, — an old patriarch, gray and venerable, with spines three inches long, and weighing, I should say, twenty pounds. The build of this animal is much like that of the woodchuck, that is, heavy and pouchy. The nose is blunter than that of the woodchuck, the limbs stronger, and the tail broader and heavier. Indeed, the latter appendage is quite clublike, and the animal can, no doubt, deal a smart blow with it. An old hunter with whom I talked thought it aided them in climbing. They are inveterate gnawers, and spend much of their time in trees gnawing the bark. In winter one will take up its abode in a hemlock, and continue there till the tree is quite denuded. The carcass emitted a peculiar, offensive odor, and, though very fat, was not in the least inviting as game. If it is part of the economy of nature for one animal to prey upon some other beneath it, then the poor devil has indeed a mouthful that makes a meal off the porcupine. Panthers and lynxes have essayed it, but have invariably left off at the first course, and have afterwards been found dead, or nearly so, with their heads puffed up like a pincushion, and the quills protruding on all sides. A dog that understands the business will manœuvre round the porcupine till he gets an opportunity to throw it over on its back, when

he fastens on its quillless underbody. Aaron was puzzled to know how long-parted friends could embrace, when it was suggested that the quills could be depressed or elevated at pleasure.

The next morning boded rain; but we had become thoroughly sated with the delights of our present quarters, outside and in, and packed up our traps to leave. Before we had reached the clearing, three miles below, the rain set in, keeping up a lazy, monotonous drizzle till the afternoon.

The clearing was quite a recent one, made mostly by bark-peelers, who followed their calling in the mountains round about in summer, and worked in their shops making shingle in winter. The Biscuit Brook came in here from the west, — a fine, rapid trout stream six or eight miles in length, with plenty of deer in the mountains about its head. On its banks we found the house of an old woodman, to whom we had been directed for information about the section we proposed to traverse.

“Is the way very difficult,” we inquired, “across from the Neversink into the head of the Beaverkill?”

“Not to me; I could go it the darkest night ever was. And I can direct you so you can find the way without any trouble. You go down the Neversink about a mile, when you come to Highfall Brook, the first stream that comes down on the right. Follow up it to Jim Reed’s shanty, about three miles. Then cross the stream, and on the left bank, pretty well up on the side of the mountain, you will find a wood-road, which was made by a fellow below here who stole some ash logs off the top of the ridge last winter and drew them out on the snow.

When the road first begins to tilt over the mountain, strike down to your left, and you can reach the Beaverkill before sundown."

As it was then after two o'clock, and as the distance was six or eight of these terrible hunters' miles, we concluded to take a whole day to it, and wait till next morning. The Beaverkill flowed west, the Neversink south, and I had a mortal dread of getting entangled amid the mountains and valleys that lie in either angle.

Besides, I was glad of another and final opportunity to pay my respects to the finny tribes of the Neversink. At this point it was one of the finest trout streams I had ever beheld. It was so sparkling, its bed so free from sediment or impurities of any kind, that it had a new look, as if it had just come from the hand of its Creator. I tramped along its margin upward of a mile that afternoon, part of the time wading to my knees, and casting my hook, baited only with a trout's fin, to the opposite bank. Trout are real cannibals, and make no bones, and break none either, in lunching on each other. A friend of mine had several in his spring, when one day a large female trout gulped down one of her male friends, nearly one third her own size, and went around for two days with the tail of her liege lord protruding from her mouth! A fish's eye will do for bait, though the anal fin is better. One of the natives here told me that when he wished to catch large trout (and I judged he never fished for any other, — I never do), he used for bait the bull-head, or dart, a little fish an inch and a half or two inches long, that rests on the pebbles near shore and darts quickly, when disturbed, from point to point. "Put

that on your hook," said he, "and if there is a big fish in the creek, he is bound to have it." But the darts were not easily found; the big fish, I concluded, had cleaned them all out; and, then, it was easy enough to supply our wants with a fin.

Declining the hospitable offers of the settlers, we spread our blankets that night in a dilapidated shingle-shop on the banks of the Biscuit Brook, first flooring the damp ground with the new shingle that lay piled in one corner. The place had a great-throated chimney with a tremendous expanse of fireplace within, that cried "More!" at every morsel of wood we gave it.

But I must hasten over this part of the ground, nor let the delicious flavor of the milk we had that morning for breakfast, and that was so delectable after four days of fish, linger on my tongue; nor yet tarry to set down the talk of that honest, weather-worn passer-by who paused before our door, and every moment on the point of resuming his way, yet stood for an hour and recited his adventures hunting deer and bears on these mountains. Having replenished our stock of bread and salt pork at the house of one of the settlers, midday found us at Reed's shanty, — one of those temporary structures erected by the bark-jobber to lodge and board his "hands" near their work. Jim not being at home, we could gain no information from the "women folks" about the way, nor from the men who had just come in to dinner; so we pushed on, as near as we could, according to the instructions we had previously received. Crossing the creek, we forced our way up the side of the mountain, through a perfect *cheval-de-frise* of fallen and

peeled hemlocks, and, entering the dense woods above, began to look anxiously about for the wood-road. My companions at first could see no trace of it; but knowing that a casual wood-road cut in winter, when there was likely to be two or three feet of snow on the ground, would present only the slightest indications to the eye in summer, I looked a little closer, and could make out a mark or two here and there. The larger trees had been avoided, and the axe used only on the small saplings and underbrush, which had been lopped off a couple of feet from the ground. By being constantly on the alert, we followed it till near the top of the mountain; but, when looking to see it "tilt" over the other side, it disappeared altogether. Some stumps of the black cherry were found, and a solitary pair of snow-shoes was hanging high and dry on a branch, but no further trace of human hands could we see. While we were resting here a couple of hermit thrushes, one of them with some sad defect in his vocal powers which barred him from uttering more than a few notes of his song, gave voice to the solitude of the place. This was the second instance in which I have observed a song-bird with apparently some organic defect in its instrument. The other case was that of a bobolink, which, hover in mid-air and inflate its throat as it might, could only force out a few incoherent notes. But the bird in each case presented this striking contrast to human examples of the kind, that it was apparently just as proud of itself, and just as well satisfied with its performance, as were its more successful rivals.

After deliberating some time over a pocket compass which I carried, we decided upon our course, and held

on to the west. The descent was very gradual. Traces of bear and deer were noted at different points, but not a live animal was seen.

About four o'clock we reached the bank of a stream flowing west. Hail to the Beaverkill! and we pushed on along its banks. The trout were plenty, and rose quickly to the hook; but we held on our way, designing to go into camp about six o'clock. Many inviting places, first on one bank, then on the other, made us linger, till finally we reached a smooth, dry place overshadowed by balsam and hemlock, where the creek bent around a little flat, which was so entirely to our fancy that we unslung our knapsacks at once. While my companions were cutting wood and making other preparations for the night, it fell to my lot, as the most successful angler, to provide the trout for supper and breakfast. How shall I describe that wild, beautiful stream, with features so like those of all other mountain streams? And yet, as I saw it in the deep twilight of those woods on that June afternoon, with its steady, even flow, and its tranquil, many-voiced murmur, it made an impression upon my mind distinct and peculiar, fraught in an eminent degree with the charm of seclusion and remoteness. The solitude was perfect, and I felt that strangeness and insignificance which the civilized man must always feel when opposing himself to such a vast scene of silence and wildness. The trout were quite black, like all wood trout, and took the bait eagerly. I followed the stream till the deepening shadows warned me to turn back. As I neared camp, the fire shone far through the trees, dispelling the gathering gloom, but blinding my eyes to all

obstacles at my feet. I was seriously disturbed on arriving to find that one of my companions had cut an ugly gash in his shin with the axe while felling a tree. As we did not carry a fifth wheel, it was not just the time or place to have any of our members crippled, and I had bodings of evil. But, thanks to the healing virtues of the balsam which must have adhered to the blade of the axe, and double thanks to the court-plaster with which Orville had supplied himself before leaving home, the wounded leg, by being favored that night and the next day, gave us little trouble.

That night we had our first fair and square camping-out, — that is, sleeping on the ground with no shelter over us but the trees, — and it was in many respects the pleasantest night we spent in the woods. The weather was perfect and the place was perfect, and for the first time we were exempt from the midges and smoke; and then we appreciated the clean new page we had to work on. Nothing is so acceptable to the camper-out as a pure article in the way of woods and waters. Any admixture of human relics mars the spirit of the scene. Yet I am willing to confess that, before we were through those woods, the marks of an axe in a tree were a welcome sight. On resuming our march next day we followed the right bank of the Beaverkill, in order to strike a stream which flowed in from the north, and which was the outlet of Balsam Lake, the objective point of that day's march. The distance to the lake from our camp could not have been over six or seven miles; yet, traveling as we did, without path or guide, climbing up banks, plunging into ravines, making detours around

swampy places, and forcing our way through woods choked up with much fallen and decayed timber, it seemed at least twice that distance, and the mid-afternoon sun was shining when we emerged into what is called the "Quaker Clearing," ground that I had been over nine years before, and that lies about two miles south of the lake. From this point we had a well-worn path that led us up a sharp rise of ground, then through level woods till we saw the bright gleam of the water through the trees.

I am always struck, on approaching these little mountain lakes, with the extensive preparation that is made for them in the conformation of the ground. I am thinking of a depression, or natural basin, in the side of the mountain or on its top, the brink of which I shall reach after a little steep climbing; but instead of that, after I have accomplished the ascent, I find a broad sweep of level or gently undulating woodland that brings me after a half hour or so to the lake, which lies in this vast lap like a drop of water in the palm of a man's hand.

Balsam Lake was oval-shaped, scarcely more than half a mile long and a quarter of a mile wide, but presented a charming picture, with a group of dark gray hemlocks filling the valley about its head, and the mountains rising above and beyond. We found a bough house in good repair, also a dug-out and paddle and several floats of logs. In the dug-out I was soon creeping along the shady side of the lake, where the trout were incessantly jumping for a species of black fly, that, sheltered from the slight breeze, were dancing in swarms just above the surface of the water. The gnats were

there in swarms also, and did their best toward balancing the accounts by preying upon me while I preyed upon the trout which preyed upon the flies. But by dint of keeping my hands, face, and neck constantly wet, I am convinced that the balance of blood was on my side. The trout jumped most within a foot or two of shore, where the water was only a few inches deep. The shallowness of the water, perhaps, accounted for the inability of the fish to do more than lift their heads above the surface. They came up mouths wide open, and dropped back again in the most impotent manner. Where there is any depth of water, a trout will jump several feet into the air; and where there is a solid, unbroken sheet or column, they will scale falls and dams fifteen feet high.

We had the very cream and flower of our trout-fishing at this lake. For the first time we could use the fly to advantage; and then the contrast between laborious tramping along shore, on the one hand, and sitting in one end of a dug-out and casting your line right and left with no fear of entanglement in brush or branch, while you were gently propelled along, on the other, was of the most pleasing character.

There were two varieties of trout in the lake, — what it seems proper to call silver trout and golden trout; the former were the slimmer, and seemed to keep apart from the latter. Starting from the outlet and working round on the eastern side toward the head, we invariably caught these first. They glanced in the sun like bars of silver. Their sides and bellies were indeed as white as new silver. As we neared the head, and especially as we came near a space occupied by some kind of water-grass

that grew in the deeper part of the lake, the other variety would begin to take the hook, their bellies a bright gold color, which became a deep orange on their fins; and as we returned to the place of departure with the bottom of the boat strewn with these bright forms intermingled, it was a sight not soon to be forgotten. It pleased my eye so, that I would fain linger over them, arranging them in rows and studying the various hues and tints. They were of nearly a uniform size, rarely one over ten or under eight inches in length, and it seemed as if the hues of all the precious metals and stones were reflected from their sides. The flesh was deep salmon-color; that of brook trout is generally much lighter. Some hunters and fishers from the valley of the Mill Brook, whom we met here, told us the trout were much larger in the lake, though far less numerous than they used to be. Brook trout do not grow large till they become scarce. It is only in streams that have been long and much fished that I have caught them as much as sixteen inches in length.

The "porcupigs" were numerous about the lake, and not at all shy. One night the heat became so intolerable in our oven-shaped bough house that I was obliged to withdraw from under its cover and lie down a little to one side. Just at daybreak, as I lay rolled in my blanket, something awoke me. Lifting up my head, there was a porcupine with his forepaws on my hips. He was apparently as much surprised as I was; and to my inquiry as to what he at that moment might be looking for, he did not pause to reply, but hitting me a slap with his tail which left three or four quills in my blanket, he scampered off down the hill into the brush.

Being an observer of the birds, of course every curious incident connected with them fell under my notice. Hence, as we stood about our camp-fire one afternoon looking out over the lake, I was the only one to see a little commotion in the water, half hidden by the near branches, as of some tiny swimmer struggling to reach the shore. Rushing to its rescue in the canoe, I found a yellow-rumped warbler, quite exhausted, clinging to a twig that hung down into the water. I brought the drenched and helpless thing to camp, and, putting it into a basket, hung it up to dry. An hour or two afterward I heard it fluttering in its prison, and when I cautiously lifted the lid to get a better glimpse of the lucky captive, it darted out and was gone in a twinkling. How came it in the water? That was my wonder, and I can only guess that it was a young bird that had never before flown over a pond of water, and, seeing the clouds and blue sky so perfect down there, thought it was a vast opening or gateway into another summer land, perhaps a short cut to the tropics, and so got itself into trouble. How my eye was delighted also with the redbird that alighted for a moment on a dry branch above the lake, just where a ray of light from the setting sun fell full upon it! A mere crimson point, and yet how it offset that dark, sombre background!

I have thus run over some of the features of an ordinary trouting excursion to the woods. People inexperienced in such matters, sitting in their rooms and thinking of these things, of all the poets have sung and romancers written, are apt to get sadly taken in

when they attempt to realize their dreams. They expect to enter a sylvan paradise of trout, cool retreats, laughing brooks, picturesque views, and balsamic couches, instead of which they find hunger, rain, smoke, toil, gnats, mosquitoes, dirt, broken rest, vulgar guides, and salt pork; and they are very apt not to see where the fun comes in. But he who goes in a right spirit will not be disappointed, and will find the taste of this kind of life better, though bitterer, than the writers have described.

JOHN MUIR

AMONG THE BIRDS OF THE YOSEMITE

TRAVELERS in the Sierra forests usually complain of the want of life. "The trees," they say, "are fine, but the empty stillness is deadly; there are no animals to be seen, no birds. We have not heard a song in all the woods." And no wonder! They go in large parties with mules and horses; they make a great noise; they are dressed in outlandish, unnatural colors; every animal shuns them. Even the frightened pines would run away if they could. But Nature-lovers, devout, silent, open-eyed, looking and listening with love, find no lack of inhabitants in these mountain mansions, and they come to them gladly. Not to mention the large animals or the small insect people, every waterfall has its ouzel and every tree its squirrel or tamias or bird: tiny nut-hatch threading the furrows of the bark, cheerily whispering to itself as it deftly pries off loose scales and examines the curled edges of lichens; or Clarke crow or jay examining the cones; or some singer — oriole, tanager, warbler — resting, feeding, attending to domestic affairs. Hawks and eagles sail overhead, grouse walk in happy flocks below, and song sparrows sing in every bed of chaparral. There is no crowding, to be sure. Unlike the low Eastern trees, those of the Sierra in the main forest belt average nearly two hundred feet in height, and of course many birds are required to make much show in them, and many voices to fill them.

Nevertheless, the whole range, from foothills to snowy summits, is shaken into song every summer; and though low and thin in winter, the music never ceases.

The sage cock (*Centrocercus urophasianus*) is the largest of the Sierra game-birds and the king of American grouse. It is an admirably strong, hardy, handsome, independent bird, able with comfort to bid defiance to heat, cold, drought, hunger, and all sorts of storms, living on whatever seeds or insects chance to come in its way, or simply on the leaves of sage-brush, everywhere abundant on its desert range. In winter, when the temperature is oftentimes below zero, and heavy snow-storms are blowing, he sits beneath a sage bush and allows himself to be covered, poking his head now and then through the snow to feed on the leaves of his shelter. Not even the Arctic ptarmigan is hardier in braving frost and snow and wintry darkness. When in full plumage he is a beautiful bird, with a long, firm, sharp-pointed tail, which in walking is slightly raised and swings sidewise back and forth with each step. The male is handsomely marked with black and white on the neck, back, and wings, weighs five or six pounds, and measures about thirty inches in length. The female is clad mostly in plain brown, and is not so large. They occasionally wander from the sage plains into the open nut pine and juniper woods, but never enter the main coniferous forest. It is only in the broad, dry, half-desert sage plains that they are quite at home, where the weather is blazing hot in summer, cold in winter. If any one passes through a flock, all squat on the gray ground and hold their heads low, hoping to escape observation;

but when approached within a rod or so, they rise with a magnificent burst of wing-beats, looking about as big as turkeys and making a noise like a whirlwind.

On the 28th of June, at the head of Owen's Valley, I caught one of the young that was then just able to fly. It was seven inches long, of a uniform gray color, blunt-billed, and when captured cried lustily in a shrill, piping voice, clear in tone as a boy's small willow whistle. I have seen flocks of from ten to thirty or forty on the east margin of the Park, where the Mono Desert meets the gray foothills of the Sierra; but since cattle have been pastured there they are becoming rarer every year.

Another magnificent bird, the blue or dusky grouse, next in size to the sage cock, is found all through the main forest belt, though not in great numbers. They like best the heaviest silver fir woods near garden and meadow openings, where there is but little underbrush to cover the approach of enemies. When a flock of these brave birds, sauntering and feeding on the sunny, flowery levels of some hidden meadow or Yosemite valley far back in the heart of the mountains, see a man for the first time in their lives, they rise with hurried notes of surprise and excitement and alight on the lowest branches of the trees, wondering what the wanderer may be, and showing great eagerness to get a good view of the strange vertical animal. Knowing nothing of guns, they allow you to approach within a half-dozen paces, then quietly hop a few branches higher or fly to the next tree without a thought of concealment, so that you may observe them as long as you like, near enough to see the fine shading of their plumage, the feathers on their toes, and

the innocent wonderment in their beautiful wild eyes. But in the neighborhood of roads and trails they soon become shy, and when disturbed fly into the highest, leafiest trees, and suddenly become invisible, so well do they know how to hide and keep still and make use of their protective coloring. Nor can they be easily dislodged ere they are ready to go. In vain the hunter goes round and round some tall pine or fir into which he has perhaps seen a dozen enter, gazing up through the branches, straining his eyes while his gun is held ready; not a feather can he see unless his eyes have been sharpened by long experience and knowledge of the blue grouse's habits. Then, perhaps, when he is thinking that the tree must be hollow and that the birds have all gone inside, they burst forth with a startling whirl of wing-beats, and after gaining full speed go skating swiftly away through the forest arches in a long, silent, wavering slide, with wings held steady.

During the summer they are most of the time on the ground, feeding on insects, seeds, berries, etc., around the margins of open spots and rocky moraines, playing and sauntering, taking sun baths and sand baths, and drinking at little pools and rills during the heat of the day. In winter they live mostly in the trees, depending on buds for food, sheltering beneath dense overlapping branches at night and during storms on the lee side of the trunk, sunning themselves on the south-side limbs in fine weather, and sometimes diving into the mealy snow to flutter and wallow, apparently for exercise and fun.

I have seen young broods running beneath the firs in June at a height of eight thousand feet above the sea.

On the approach of danger, the mother with a peculiar cry warns the helpless midgets to scatter and hide beneath leaves and twigs, and even in plain open places it is almost impossible to discover them. In the mean time the mother feigns lameness, throws herself at your feet, kicks and gasps and flutters, to draw your attention from the chicks. The young are generally able to fly about the middle of July; but even after they can fly well they are usually advised to run and hide and lie still, no matter how closely approached, while the mother goes on with her loving, lying acting, apparently as desperately concerned for their safety as when they were featherless infants. Sometimes, however, after carefully studying the circumstances, she tells them to take wing; and up and away in a blurry birr and whir they scatter to all points of the compass, as if blown up with gunpowder, dropping cunningly out of sight three or four hundred yards off, and keeping quiet until called, after the danger is supposed to be past. If you walk on a little way without manifesting any inclination to hunt them, you may sit down at the foot of a tree near enough to see and hear the happy reunion. One touch of nature makes the whole world kin; and it is truly wonderful how love-telling the small voices of these birds are, and how far they reach through the woods into one another's hearts and into ours. The tones are so perfectly human and so full of anxious affection, few mountaineers can fail to be touched by them.

They are cared for until full grown. On the 20th of August, as I was passing along the margin of a garden spot on the headwaters of the San Joaquin, a grouse

rose from the ruins of an old juniper that had been uprooted and brought down by an avalanche from a cliff overhead. She threw herself at my feet, limped and fluttered and gasped, showing, as I thought, that she had a nest and was raising a second brood. Looking for the eggs, I was surprised to see a strong-winged flock nearly as large as the mother fly up around me.

Instead of seeking a warmer climate when the winter storms set in, these hardy birds stay all the year in the high Sierra forests, and I have never known them to suffer in any sort of weather. Able to live on the buds of pine, spruce, and fir, they are forever independent in the matter of food-supply, which gives so many of us trouble, dragging us here and there away from our best work. How gladly I would live on pine buds, however pitchy, for the sake of this grand independence! With all his superior resources, man makes more distracting difficulty concerning food than any other of the family.

The mountain quail, or plumed partridge (*Oreortyx pictus plumiferus*) is common in all the upper portions of the Park, though nowhere in numbers. He ranges considerably higher than the grouse in summer, but is unable to endure the heavy storms of winter. When his food is buried, he descends the range to the brushy foothills, at a height of from two thousand to three thousand feet above the sea; but, like every true mountaineer, he is quick to follow the spring back into the highest mountains. I think he is the very handsomest and most interesting of all the American partridges, larger and handsomer than the famous Bob White, or

even the fine California valley quail, or the Massena partridge of Arizona and Mexico. That he is not so regarded, is because as a lonely mountaineer he is not half known.

His plumage is delicately shaded, brown above, white and rich chestnut below and on the sides, with many dainty markings of black and white and gray here and there, while his beautiful head-plume, three or four inches long, nearly straight, composed of two feathers closely folded so as to appear as one, is worn jauntily slanted backward like a single feather in a boy's cap, giving him a very marked appearance. They wander over the lonely mountains in family flocks of from six to fifteen, beneath ceanothus, manzanita, and wild cherry thickets, and over dry sandy flats, glacier meadows, rocky ridges, and beds of bryanthus around glacier lakes, especially in autumn, when the berries of the upper gardens are ripe, uttering low clucking notes to enable them to keep together. When they are so suddenly disturbed that they are afraid they cannot escape the danger by running into thickets, they rise with a fine hearty whirl and scatter in the brush over an area of half a square mile or so, a few of them diving into leafy trees. But as soon as the danger is past, the parents with a clear piping note call them together again. By the end of July the young are two-thirds grown and fly well, though only dire necessity can compel them to try their wings. In gait, gestures, habits, and general behavior they are like domestic chickens, but infinitely finer, searching for insects and seeds, looking to this side and that, scratching among fallen leaves, jumping up to pull

down grass heads, and clucking and muttering in low tones.

Once when I was seated at the foot of a tree on the headwaters of the Merced, sketching, I heard a flock up the valley behind me, and by their voices gradually sounding nearer I knew that they were feeding toward me. I kept still, hoping to see them. Soon one came within three or four feet of me, without noticing me any more than if I were a stump or a bulging part of the trunk against which I was leaning, my clothing being brown, nearly like the bark. Presently along came another and another, and it was delightful to get so near a view of these handsome chickens perfectly undisturbed, observe their manners, and hear their low, peaceful notes. At last one of them caught my eye, gazed in silent wonder for a moment, then uttered a peculiar cry, which was followed by a lot of hurried muttered notes that sounded like speech. The others, of course, saw me as soon as the alarm was sounded, and joined the wonder talk, gazing and chattering, astonished but not frightened. Then all with one accord ran back with the news to the rest of the flock. "What is it? what is it? Oh, you never saw the like," they seemed to be saying. "Not a deer, or a wolf, or a bear; come see, come see." "Where? where?" "Down there by that tree." Then they approached cautiously, past the tree, stretching their necks, and looking up in turn, as if knowing from the story told them just where I was. For fifteen or twenty minutes they kept coming and going, venturing within a few feet of me, and discussing the wonder in charming chatter. Their curiosity at last

satisfied, they began to scatter and feed again, going back in the direction they had come from; while I, loath to part with them, followed noiselessly, crawling beneath the bushes, keeping them in sight for an hour or two, learning their habits, and finding out what seeds and berries they liked best.

The valley quail is not a mountaineer, and seldom enters the Park except at a few of the lowest places on the western boundary. It belongs to the brushy foothills and plains, orchards and wheatfields, and is a hundred times more numerous than the mountain quail. It is a beautiful bird, about the size of the bob-white, and has a handsome crest of four or five feathers an inch long, recurved, standing nearly erect at times or drooping forward. The loud calls of these quails in the spring — *pe-check-ah*, *pe-check-a*, *hoy*, *hoy* — are heard far and near over all the lowlands. They have vastly increased in numbers since the settlement of the country, notwithstanding the immense numbers killed every season by boys and pot-hunters as well as the regular legged sportsmen from the towns; for man's destructive action is more than counterbalanced by increased supply of food from cultivation, and by the destruction of their enemies — coyotes, skunks, foxes, hawks, owls, etc. — which not only kill the old birds, but plunder their nests. Where coyotes and skunks abound, scarce one pair in a hundred is successful in raising a brood. So well aware are these birds of the protection afforded by man, even now that the number of their wild enemies has been greatly diminished, that they prefer to nest near houses, notwithstanding they are so shy. Four or

five pairs rear their young around our cottage every spring. One year a pair nested in a straw-pile within four or five feet of the stable door, and did not leave the eggs when the men led the horses back and forth within a foot or two. For many seasons a pair nested in a tuft of pampas grass in the garden; another pair in an ivy vine on the cottage roof, and when the young were hatched, it was interesting to see the parents getting the fluffy dots down. They were greatly excited, and their anxious calls and directions to their many babes attracted our attention. They had no great difficulty in persuading the young birds to pitch themselves from the main roof to the porch roof among the ivy, but to get them safely down from the latter to the ground, a distance of ten feet, was most distressing. It seemed impossible the frail soft things could avoid being killed. The anxious parents led them to a point above a spiræa bush that reached nearly to the eaves, which they seemed to know would break the fall. Anyhow they led their chicks to this point, and with infinite coaxing and encouragement got them to tumble themselves off. Down they rolled and sifted through the soft leaves and panicles to the pavement, and, strange to say, all got away unhurt except one, that lay as if dead for a few minutes. When it revived, the joyful parents, with their brood fairly launched on the journey of life, proudly led them down the cottage hill, through the garden, and along an osage orange hedge into the cherry orchard. These charming birds even enter towns and villages, where the gardens are of good size and guns are forbidden, sometimes going several miles to feed, and

returning every evening to their roosts in ivy or brushy trees and shrubs.

Geese occasionally visit the Park, but never stay long. Sometimes on their way across the range, a flock wanders into Hetch-Hetchy or Yosemite to rest or get something to eat, and if shot at, are often sorely bewildered in seeking a way out. I have seen them rise from the meadow or river, wheel round in a spiral until a height of four or five hundred feet was reached, then form ranks and try to fly over the wall. But Yosemite magnitudes seem to be as deceptive to geese as to men, for they would suddenly find themselves against the cliffs not a fourth of the way to the top. Then turning in confusion, and screaming at the strange heights, they would try the opposite side and so on until exhausted they were compelled to rest, and only after discovering the river cañon could they make their escape. Large, harrow-shaped flocks may often be seen crossing the range in the spring, at a height of at least fourteen thousand feet. Think of the strength of wing required to sustain so heavy a bird in air so thin. At this elevation it is but little over half as dense as at the sea-level. Yet they hold bravely on in beautifully dressed ranks, and have breath enough to spare for loud honking. After the crest of the Sierra is passed it is only a smooth slide down the sky to the waters of Mono, where they may rest as long as they like.

Ducks of five or six species, among which are the mallard and wood duck, go far up into the heart of the mountains in the spring, and of course come down in the fall with the families they have reared. A few, as if

loath to leave the mountains, pass the winter in the lower valleys of the Park at a height of three thousand to four thousand feet, where the main streams are never wholly frozen over, and snow never falls to a great depth or lies long. In summer they are found up to a height of eleven thousand feet on all the lakes and branches of the rivers except the smallest, and those beside the glaciers encumbered with drifting ice and snow. I found mallards and wood ducks at Lake Tenaya, June 1, before the ice covering was half melted, and a flock of young ones in Bloody Cañon Lake, June 20. They are usually met in pairs, never in large flocks. No place is too wild or rocky or solitary for these brave swimmers, no stream too rapid. In the roaring, resounding cañon torrents, they seem as much at home as in the tranquil reaches and lakes of the broad glacial valleys. Abandoning themselves to the wild play of the waters, they go drifting confidently through blinding, thrashing spray, dancing on boulder-dashed waves, 'tossing in beautiful security on rougher water than is usually encountered by sea-birds when storms are blowing.

A mother duck with her family of ten little ones, waltzing round and round in a pot-hole ornamented with foam bells, huge rocks leaning over them, cascades above and below and beside them, made one of the most interesting bird pictures I ever saw.

I have never found the great northern diver in the Park lakes. Most of them are inaccessible to him. He might plump down into them, but would hardly be able to get out of them, since, with his small wings and heavy

body, a wide expanse of elbow room is required in rising. Now and then one may be seen in the lower Sierra lakes to the northward about Lassens Butte and Shasta, at a height of four thousand to five thousand feet, making the loneliest places lonelier with the wildest of wild cries.

Plovers are found along the sandy shores of nearly all the mountain lakes, tripping daintily on the water's edge, picking up insects; and it is interesting to learn how few of these familiar birds are required to make a solitude cheerful.

Sandhill cranes are sometimes found in comparatively small marshes, mere dots in the mighty forest. In such spots, at an elevation of from six thousand to eight thousand feet above the sea, they are occasionally met in pairs as early as the end of May, while the snow is still deep in the surrounding fir and sugar-pine woods. And on sunny days in autumn, large flocks may be seen sailing at a great height above the forests, shaking the crisp air into rolling waves with their hearty *koor-r-r*, *koor-r-r*, *uck-uck*, soaring in circles for hours together on their majestic wings, seeming to float without effort like clouds, eying the wrinkled landscape outspread like a map mottled with lakes and glaciers and meadows and streaked with shadowy cañons and streams, and surveying every frog marsh and sandy flat within a hundred miles.

Eagles and hawks are oftentimes seen above the ridges and domes. The greatest height at which I have observed them was about twelve thousand feet, over the summits of Mount Hoffman, in the middle region of the

Park. A few pairs had their nests on the cliffs of this mountain, and could be seen every day in summer, hunting marmots, mountain beavers, pikas, etc. A pair of golden eagles have made their home in Yosemite ever since I went there thirty years ago. Their nest is on the Nevada Fall Cliff, opposite the Liberty Cap. Their screams are rather pleasant to hear in the vast gulfs between the granite cliffs, and they help the owls in keeping the echoes busy.

But of all the birds of the high Sierra, the strangest, noisiest, and most notable is the Clarke crow (*Nucifraga columbiana*). He is a foot long and nearly two feet in extent of wing, ashy gray in general color, with black wings, white tail, and a strong, sharp bill, with which he digs into the pine cones for the seeds on which he mainly subsists. He is quick, boisterous, jerky, and irregular in his movements and speech, and makes a tremendously loud and showy advertisement of himself, — swooping and diving in deep curves across gorges and valleys from ridge to ridge, alighting on dead spars, looking warily about him, and leaving his dry, springy perches trembling from the vigor of his kick as he launches himself for a new flight, screaming from time to time loud enough to be heard more than a mile in still weather. He dwells far back on the high storm-beaten margin of the forest, where the mountain pine, juniper, and hemlock grow wide apart on glacier pavements and domes and rough crumbling ridges, and the dwarf pine makes a low crinkled growth along the flanks of the Summit peaks. In so open a region, of course, he is well seen. Everybody notices him, and nobody at first knows what

to make of him. One guesses he must be a woodpecker; another a crow or some sort of jay, another a magpie. He seems to be a pretty thoroughly mixed and fermented compound of all these birds, has all their strength, cunning, shyness, thievishness, and wary, suspicious curiosity combined and condensed. He flies like a woodpecker, hammers dead limbs for insects, digs big holes in pine cones to get at the seeds, cracks nuts held between his toes, cries like a crow or Steller jay, — but in a far louder, harsher, and more forbidding tone of voice, — and besides his crow caws and screams, has a great variety of small chatter talk, mostly uttered in a fault-finding tone. Like the magpie, he steals articles that can be of no use to him. Once when I made my camp in a grove at Cathedral Lake, I chanced to leave a cake of soap on the shore where I had been washing, and a few minutes afterward I saw my soap flying past me through the grove, pushed by a Clarke crow.

In winter, when the snow is deep, the cones of the mountain pines are empty, and the juniper, hemlock, and dwarf pine orchard buried, he comes down to glean seeds in the yellow pine forests, startling the grouse with his loud screams. But even in winter, in calm weather, he stays in his high mountain home, defying the bitter frost. Once I lay snowbound through a three days' storm at the timber-line on Mount Shasta; and while the roaring snow-laden blast swept by, one of these brave birds came to my camp, and began hammering at the cones on the topmost branches of half-buried pines, without showing the slightest distress. I have seen Clarke crows feeding their young as early as June 19, at

a height of more than ten thousand feet, when nearly the whole landscape was snow-covered.

They are excessively shy, and keep away from the traveler as long as they think they are observed; but when one goes on without seeming to notice them, or sits down and keeps still, their curiosity speedily gets the better of their caution, and they come flying from tree to tree, nearer and nearer, and watch every motion. Few, I am afraid, will ever learn to like this bird, he is so suspicious and self-reliant, and his voice is so harsh that to most ears the scream of the eagle will seem melodious compared with it. Yet the mountaineer who has battled and suffered and struggled must admire his strength and endurance, — the way he faces the mountain weather, cleaves the icy blasts, cares for his young, and digs a living from the stern wilderness.

Higher yet than *Nucifraga* dwells the little dun-headed sparrow (*Leucosticte tephrocotis*). From early spring to late autumn he is to be found only on the snowy, icy peaks at the head of the glacier cirques and cañons. His feeding-grounds in spring are the snow-sheets between the peaks, and in midsummer and autumn the glaciers. Many bold insects go mountaineering almost as soon as they are born, ascending the highest summits on the mild breezes that blow in from the sea every day during steady weather; but comparatively few of these adventurers find their way down or see a flower-bed again. Getting tired and chilly, they alight on the snow fields and glaciers, attracted perhaps by the glare, take cold, and die. There they lie as if on a white cloth purposely outspread for them, and the dun sparrows find

them a rich and varied repast requiring no pursuit, — bees and butterflies on ice, and many spicy beetles, a perpetual feast, on tables big for guests so small, and in vast banqueting-halls ventilated by cool breezes that ruffle the feathers of the fairy brownies. Happy fellows, no rivals come to dispute possession with them. No other birds, not even hawks, as far as I have noticed, live so high. They see people so seldom, they flutter around the explorer with the liveliest curiosity, and come down a little way, sometimes nearly a mile, to meet him and conduct him into their icy homes.

When I was exploring the Merced group, climbing up the grand cañon between the Merced and Red mountains into the fountain amphitheatre of an ancient glacier, just as I was approaching the small active glacier that leans back in the shadow of Merced Mountain, a flock of twenty or thirty of these little birds, the first I had seen, came down the cañon to meet me, flying low, straight toward me as if they meant to fly in my face. Instead of attacking me or passing by, they circled round my head, chirping and fluttering for a minute or two, then turned and escorted me up the cañon, alighting on the nearest rocks on either hand, and flying ahead a few yards at a time to keep even with me.

I have not discovered their winter quarters. Probably they are in the desert ranges to the eastward, for I never saw any of them in Yosemite, the winter refuge of so many of the mountain birds.

Hummingbirds are among the best and most conspicuous of the mountaineers, flashing their ruby throats in countless wild gardens far up the higher slopes, where

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they would be least expected. All one has to do to enjoy the company of these mountain-loving midgets is to display a showy blanket or handkerchief.

The arctic bluebird is another delightful mountaineer, singing a wild, cheery song and "carrying the sky on its back" over all the gray ridges and domes of the sub-alpine region.

A fine, hearty, good-natured lot of woodpeckers dwell in the Park, and keep it lively all the year round. Among the most notable of these are the magnificent log-cock (*Ceophlæus pileatus*), the prince of Sierra woodpeckers, and only second in rank, as far as I know, of all the woodpeckers of the world; the Lewis woodpecker, large, black, glossy, that flaps and flies like a crow, does but little hammering, and feeds in great part on wild cherries and berries; and the carpenter, who stores up great quantities of acorns in the bark of trees for winter use. The last-named species is a beautiful bird, and far more common than the others. In the woods of the West he represents the Eastern red-head. Bright, cheerful, industrious, not in the least shy, the carpenters give delightful animation to the open Sierra forests at a height of from three thousand to fifty-five hundred feet, especially in autumn, when the acorns are ripe. Then no squirrel works harder at his pine-nut harvest than these woodpeckers at their acorn harvest, drilling holes in the thick, corky bark of the yellow pine and incense cedar, in which to store the crop for winter use, — a hole for each acorn, so nicely adjusted as to size that when the acorn, point foremost, is driven in, it fits so well that it cannot be drawn out without digging around it. Each

acorn is thus carefully stored in a dry bin, perfectly protected from the weather, — a most laborious method of stowing away a crop, a granary for each kernel. Yet the birds seem never to weary at the work, but go on so diligently that they seem determined to save every acorn in the grove. They are never seen eating acorns at the time they are storing them, and it is commonly believed that they never eat them or intend to eat them, but that the wise birds store them and protect them from the depredations of squirrels and jays, solely for the sake of the worms they are supposed to contain. And because these worms are too small for use at the time the acorns drop, they are shut up like lean calves and steers, each in a separate stall with abundance of food, to grow big and fat by the time they will be most wanted, that is, in winter, when insects are scarce and stall-fed worms most valuable. So these woodpeckers are supposed to be a sort of cattle-raisers, each with a drove of thousands, rivaling the ants that raise grain and keep herds of plant-lice for milk cows. Needless to say the story is not true, though some naturalists, even, believe it. When Emerson was in the Park, having heard the worm story and seen the great pines plugged full of acorns, he asked (just to pump me, I suppose), "Why do the woodpeckers take the trouble to put acorns into the bark of the trees?" "For the same reason," I replied, "that bees store honey and squirrels nuts." "But they tell me, Mr. Muir, that woodpeckers don't eat acorns." "Yes, they do," I said, "I have seen them eating them. During snow-storms they seem to eat little besides acorns. I have repeatedly interrupted them at their

meals, and seen the perfectly sound, half-eaten acorns. They eat them in the shell as some people eat eggs." "But what about the worms?" "I suppose," I said, "that when they come to a wormy one they eat both worm and acorn. Anyhow, they eat the sound ones when they can't find anything they like better, and from the time they store them until they are used they guard them, and woe to the squirrel or jay caught stealing." Indians, in times of scarcity, frequently resort to these stores and chop them out with hatchets; a bushel or more may be gathered from a single cedar or pine.

The common robin, with all his familiar notes and gestures, is found nearly everywhere throughout the Park, — in shady dells beneath dogwoods and maples, along the flowery banks of the streams, tripping daintily about the margins of meadows in the fir and pine woods, and far beyond on the shores of glacier lakes and the slopes of the peaks. How admirable the constitution and temper of this cheery, graceful bird, keeping glad health over so vast and varied a range! In all America he is at home, flying from plains to mountains, up and down, north and south, away and back, with the seasons and supply of food. Oftentimes in the High Sierra, as you wander through the solemn woods, awestricken and silent, you will hear the reassuring voice of this fellow wanderer ringing out sweet and clear as if saying, "Fear not, fear not. Only love is here." In the severest solitudes he seems as happy as in gardens and apple orchards.

The robins enter the Park as soon as the snow melts,

and go on up the mountains, gradually higher, with the opening flowers, until the topmost glacier meadows are reached in June and July. After the short summer is done, they descend, like most other summer visitors, in concord with the weather, keeping out of the first heavy snows as much as possible, while lingering among the frost-nipped wild cherries on the slopes just below the glacier meadows. Thence they go to the lower slopes of the forest region, compelled to make haste at times by heavy all-day storms, picking up seeds or benumbed insects by the way; and at last all, save a few that winter in Yosemite valleys, arrive in the vineyards and orchards and stubble-fields of the lowlands in November, picking up fallen fruit and grain, and awakening old-time memories among the white-headed pioneers, who cannot fail to recognize the influence of so homelike a bird. They are then in flocks of hundreds, and make their way into the gardens of towns as well as into the parks and fields and orchards about the bay of San Francisco, where many of the wanderers are shot for sport and the morsel of meat on their breasts. Man then seems a beast of prey. Not even genuine piety can make the robin-killer quite respectable. Saturday is the great slaughter day in the bay region. Then the city pot-hunters, with a rag-tag of boys, go forth to kill, kept in countenance by a sprinkling of regular sportsmen arrayed in self-conscious majesty and leggins, leading dogs and carrying hammerless, breech-loading guns of famous makers. Over the fine landscapes the killing goes forward with shameful enthusiasm. After escaping countless dangers, thousands fall, big bagfuls are gathered, many are left

wounded to die slowly, no Red Cross Society to help them. Next day, Sunday, the blood and leggins vanish from the most devout of the bird-butchers, who go to church, carrying gold-headed canes instead of guns. After hymns, prayers, and sermon they go home to feast, to put God's song-birds to use, put them in their dinners instead of in their hearts, eat them, and suck the pitiful little drumsticks. It is only race living on race, to be sure, but Christians singing Divine Love need not be driven to such straits while wheat and apples grow and the shops are full of dead cattle. Song-birds for food! Compared with this, making kindlings of pianos and violins would be pious economy.

The larks come in large flocks from the hills and mountains in the fall, and are slaughtered as ruthlessly as the robins. Fortunately, most of our song-birds keep back in leafy hidings, and are comparatively inaccessible.

The water ouzel, in his rocky home amid foaming waters, seldom sees a gun, and of all the singers I like him the best. He is a plainly dressed little bird, about the size of a robin, with short, crisp, but rather broad wings, and a tail of moderate length, slanted up, giving him, with his nodding, bobbing manners, a wrennish look. He is usually seen fluttering about in the spray of falls and the rapid cascading portions of the main branches of the rivers. These are his favorite haunts; but he is often seen also on comparatively level reaches and occasionally on the shores of mountain lakes, especially at the beginning of winter, when heavy snowfalls have blurred the streams with sludge. Though not a

water-bird in structure, he gets his living in the water, and is never seen away from the immediate margin of streams. He dives fearlessly into rough, boiling eddies and rapids to feed at the bottom, flying under water seemingly as easily as in the air. Sometimes he wades in shallow places, thrusting his head under from time to time in a nodding, frisky way that is sure to attract attention. His flight is a solid whir of wing-beats like that of a partridge, and in going from place to place along his favorite string of rapids he follows the windings of the stream, and usually alights on some rock or snag on the bank or out in the current, or rarely on the dry limb of an overhanging tree, perching like a tree bird when it suits his convenience. He has the oddest, neatest manners imaginable, and all his gestures as he flits about in the wild, dashing waters bespeak the utmost cheerfulness and confidence. He sings both winter and summer, in all sorts of weather, — a sweet, fluty melody, rather low, and much less keen and accentuated than from the brisk vigor of his movements one would be led to expect.

How romantic and beautiful is the life of this brave little singer on the wild mountain streams, building his round, bossy nest of moss by the side of a rapid or fall, where it is sprinkled and kept fresh and green by the spray! No wonder he sings well, since all the air about him is music; every breath he draws is part of a song, and he gets his first music lessons before he is born; for the eggs vibrate in time with the tones of the waterfalls. Bird and stream are inseparable, songful and wild, gentle and strong, — the bird ever in danger in the midst

of the stream's mad whirlpools, yet seemingly immortal. And so I might go on, writing words, words, words; but to what purpose? Go see him and love him, and through him as through a window look into Nature's warm heart.

THE SEQUOIA

THE Big Tree (*Sequoia gigantea*) is Nature's forest masterpiece, and, so 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, in 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 sequoias. 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 their 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-growing 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 dome-shaped. 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. It shoots forth its limbs 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 outline 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 snow-storms, 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 domed 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 as 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 madrona, 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 the 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 is 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 trees 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 King's 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 half-way 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 on their bounty. Other trees may claim to be about as large or as old: Australian gums, Senegal baobabs, Mexican taxodiums, 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, but 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 im-

pressive and suggestive views into history. The majestic monument of the King's 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 Mahomet'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 used 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 a 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.

The following sequoia notes and measurements are copied from my notebooks:—

| | Diameter. | | Height in Feet. | Age. Years. |
|----|-----------|---------------|-----------------|-------------------|
| | Feet. | Inches. | | |
| 0 | 1 | 3-4 | 10 | 7 |
| 0 | 5 | | 24 | 20 |
| 0 | 5 | | 25 | 41 |
| 0 | 6 | | 25 | 66 |
| 0 | 6 | | 28 1-2 | 39 |
| 0 | 8 | | 25 | 29 |
| 0 | 11 | | 45 | 71 |
| 1 | 0 | | 60 | 71 |
| 3 | 2 | | 156 | 260 |
| 6 | 0 | | 192 | 240 |
| 7 | 3 | | 195 | 339 |
| 7 | 3 | | 255 | 506 |
| 7 | 6 | | 240 | 493 |
| 7 | 7 | | 207 | 424 |
| 9 | 0 | | 243 | 259 |
| 9 | 3 | | 222 | 280 |
| 10 | 6 | | | 1440 |
| 12 | | | | 1825 ¹ |
| 15 | | | | 2150 ² |
| 24 | | | | 1300 |
| 25 | | | | 2300 |
| 35 | | 8 inside bark | | over 4000 |

¹ 6 feet in diameter at height of 200 feet.

² 7 feet in diameter at height of 200 feet.

Little, however, is to be learned in confused, hurried tourist trips, spending only a poor noisy hour in a branded grove with a guide. You should go looking and listening alone on long walks through the wild forests and groves in all the seasons of the year. In the spring the winds are balmy and sweet, blowing up and down over great beds of chaparral and through the woods now rich in softening balsam and rosin and the scent of steaming earth. The sky is mostly sunshine, oftentimes tempered by magnificent clouds, the breath of the sea built up into new mountain ranges, warm during the day, cool at night, good flower-opening weather. The young cones of the Big Trees are showing in clusters, their flower time already past, and here and there you may see the sprouting of their tiny seeds of the previous autumn, taking their first feeble hold of the ground and unpacking their tender whorls of cotyledon leaves. Then you will naturally be led on to consider their wonderful growth up and up through the mountain weather, now buried in snow, bent and crinkled, now straightening in summer sunshine like uncoiling ferns, shooting eagerly aloft in youth's joyful prime, and towering serene and satisfied through countless years of calm and storm, the greatest of plants and all but immortal.

Under the huge trees up come the small plant people, putting forth fresh leaves and blossoming in such profusion that the hills and valleys would still seem gloriously rich and glad were all the grand trees away. By the side of melting snowbanks rise the crimson sarcodes, round-topped and massive as the sequoias themselves, and beds of blue violets and larger yellow ones with

leaves curiously lobed; azalea and saxifrage, daisies and lilies on the mossy banks of the streams; and a little way back of them, beneath the trees and on sunny spots on the hills around the groves, wild rose and rubus, spiræa and ribes, mitella, tiarella, campanula, monardella, forget-me-not, etc., many of them as worthy of lore-immortality as the famous Scotch daisy, wanting only a Burns to sing them home to all hearts.

In the midst of this glad plant work the birds are busy nesting, some singing at their work, some silent, others, especially the big pileated woodpeckers, about as noisy as backwoodsmen building their cabins. Then every bower in the groves is a bridal bower, the winds murmur softly overhead, the streams sing with the birds, while from far-off waterfalls and thunder-clouds come deep rolling organ notes.

In summer the days go by in almost constant brightness, cloudless sunshine pouring over the forest roof, while in the shady depths there is the subdued light of perpetual morning. The new leaves and cones are growing fast and make a grand show, seeds are ripening, young birds learning to fly, and myriads of insects glad as birds keeping the air whirling, joy in every wing-beat, their humming and singing blending with the gentle ah-ing of the winds; while at evening every thicket and grove is enchanted by the tranquil chirping of the blessed hylas, the sweetest and most peaceful of sounds, telling the very heart-joy of earth as it rolls through the heavens.

In the autumn the sighing of the winds is softer than ever, the gentle ah-ah-ing filling the sky with a fine uni-

versal mist of music, the birds have little to say, and there is no appreciable stir or rustling among the trees save that caused by the harvesting squirrels. Most of the seeds are ripe and away, those of the trees mottling the sunny air, glinting, glancing through the midst of the merry insect people, rocks and trees, everything alike drenched in gold light, heaven's colors coming down to the meadows and groves, making every leaf a romance, air, earth, and water in peace beyond thought, the great brooding days opening and closing in divine psalms of color.

Winter comes suddenly, arrayed in storms, though to mountaineers silky streamers on the peaks and the tones of the wind give sufficient warning. You hear strange whisperings among the tree-tops, as if the giants were taking counsel together. One after another, nodding and swaying, calling and replying, spreads the news, until all with one accord break forth into glorious song, welcoming the first grand snow-storm of the year, and looming up in the dim clouds and snowdrifts like lighthouse towers in flying scud and spray. Studying the behavior of the giants from some friendly shelter, you will see that even in the glow of their wildest enthusiasm, when the storm roars loudest, they never lose their godlike composure, never toss their arms or bow or wave like the pines, but only slowly, solemnly nod and sway, standing erect, making no sign of strife, none of rest, neither in alliance nor at war with the winds, too calmly, unconsciously noble and strong to strive with or bid defiance to anything. Owing to the density of the leafy branchlets and great breadth of head the Big

Tree carries a much heavier load of snow than any of its neighbors, and after a storm, when the sky clears, the laden trees are a glorious spectacle, worth any amount of cold camping to see. Every bossy limb and crown is solid white, and the immense height of the giants becomes visible as the eye travels the white steps of the colossal tower, each relieved by a mass of blue shadow.

In midwinter the forest depths are as fresh and pure as the crevasses and caves of glaciers. Grouse, nut-hatches, a few woodpeckers, and other hardy birds dwell in the groves all winter, and the squirrels may be seen every clear day frisking about, lively as ever, tunneling to their stores, never coming up empty-mouthed, diving in the loose snow about as quickly as ducks in water, while storms and sunshine sing to each other.

One of the noblest and most beautiful of the late winter sights is the blossoming of the Big Trees like gigantic goldenrods and the sowing of their pollen over all the forest and the snow-covered ground — a most glorious view of Nature's immortal virility and flower-love.

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, topo-

graphy, 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 headwaters of King's 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. 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 noticed 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 spiderweb, 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 Mari-
posa 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 above one 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 attains full stature on some commanding ridge it seems the very god of the woods. I ran back to camp, packed Brownie, 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 landslide. 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 that not only were most of the Big Trees uninjured, but 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 boundaries of the grove, anxious to see every tree, I came suddenly on 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, weary-eyed, speculative, 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, 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 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 quail came to his call to be fed, and he tenderly stroked the little snow-bent sapling sequoias, hoping they yet might 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 in neither 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 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, 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 post-glacial 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.

In the cones and sometimes in the lower portion of the trunk and roots there is a dark gritty substance which dissolves readily in water and yields a magnificent purple color. It is a strong astringent, and is said to be used by the Indians as a big medicine. Mr. Nelder showed me specimens of ink he had made from it, which I tried and found good, flowing freely and holding its color well. Indeed everything about the tree seems constant. With these interesting trees, forming the largest of the northern groves, I stopped only a week, for I had far to go before the fall of the snow. The hermit seemed to cling to me and tried to make me promise to winter with him after the season's work was done. Brownie had to be got home, however, and other work awaited me, therefore I could only promise to stop a day or two on my way back to Yosemite and give him the forest news.

The next two weeks were spent in the wide basin of the San Joaquin, climbing innumerable ridges and surveying the far-extending sea of pines and firs. But not a single sequoia crown appeared among them all, nor any trace of a fallen trunk, until I had crossed the south divide of the basin, opposite Dinky Creek, one of the northmost tributaries of King's River. On this stream there is a small grove, said to have been discovered a few years before my visit by two hunters in pursuit of a wounded bear. Just as I was fording one of the branches of Dinky Creek I met a shepherd, and when I asked him whether he knew anything about the

Big Trees of the neighborhood he replied, "I know all about them, for I visited them only a few days ago and pastured my sheep in the grove." He was fresh from the East, and as this was his first summer in the Sierra I was curious to learn what impression the sequoias had made on him. When I asked whether it was true that the Big Trees were really so big as people say, he warmly replied, "Oh, yes, sir, you bet. They're whales. I never used to believe half I heard about the awful size of California trees, but they're monsters and no mistake. One of them over here, they tell me, is the biggest tree in the whole world, and I guess it is, for it's forty foot through and as many good long paces around." He was very earnest, and in fullness of faith offered to guide me to the grove that I might not miss seeing this biggest tree. A fair measurement four feet from the ground, above the main swell of the roots, showed a diameter of only thirty-two feet, much to the young man's disgust. "Only thirty-two feet," he lamented, "only thirty-two, and I always thought it was forty!" Then with a sigh of relief, "No matter, that's a big tree, anyway; no fool of a tree, sir, that you can cut a plank out of thirty feet broad, straight-edged, no bark, all good wood, sound and solid. It would make the brag white pine planks from old Maine look like laths." A good many other fine specimens are distributed along three small branches of the creek, and I noticed several thrifty moderate-sized sequoias growing on a granite ledge, apparently as independent of deep soil as the pines and firs, clinging to seams and fissures and sending their roots far abroad in search of moisture.

The creek is very clear and beautiful, gliding through tangles of shrubs and flower-beds, gay bee and butterfly pastures, the grove's own stream, pure sequoia water, flowing all the year, every drop filtered through moss and leaves and the myriad spongy rootlets of the giant trees. One of the most interesting features of the grove is a small waterfall with a flowery, ferny, clear brimming pool at the foot of it. How cheerily it sings the songs of the wilderness, and how sweet its tones! You seem to taste as well as hear them, while only the subdued roar of the river in the deep cañon reaches up into the grove, sounding like the sea and the winds. So charming a fall and pool in the heart of so glorious a forest good pagans would have consecrated to some lovely nymph.

Hence down into the main King's River cañon, a mile deep, I led and dragged and shoved my patient, much-enduring mule through miles and miles of gardens and brush, fording innumerable streams, crossing savage rock-slopes and taluses, scrambling, sliding through gulches and gorges, then up into the grand sequoia forests of the south side, cheered by the royal crowns displayed on the narrow horizon. In a day and a half we reached the sequoia woods in the neighborhood of the old Thomas Mill Flat. Thence striking off north-eastward I found a magnificent forest nearly six miles long by two in width, composed mostly of Big Trees, with outlying groves as far east as Boulder Creek. Here five or six days were spent, and it was delightful to learn from countless trees, old and young, how comfortably they were settled down in concordance with climate and soil and their noble neighbors.

Imbedded in these majestic woods there are numerous meadows, around the sides of which the Big Trees press close together in beautiful lines, showing their grandeur openly from the ground to their domed heads in the sky. The young trees are still more numerous and exuberant than in the Fresno and Dinky groves, standing apart in beautiful family groups, or crowding around the old giants. For every venerable lightning-stricken tree, there is one or more in all the glory of prime, and for each of these, many young trees and crowds of saplings. The young trees express the grandeur of their race in a way indefinable by any words at my command. When they are five or six feet in diameter and a hundred and fifty feet high, they seem like mere baby saplings as many inches in diameter, their juvenile habit and gestures completely veiling their real size, even to those who, from long experience, are able to make fair approximation in their measurements of common trees. One morning I noticed three airy, spiry, quick-growing babies on the side of a meadow, the largest of which I took to be about eight inches in diameter. On measuring it, I found to my astonishment it was five feet six inches in diameter, and about a hundred and forty feet high.

On a bed of sandy ground fifteen yards square, which had been occupied by four sugar pines, I counted ninety-four promising seedlings, an instance of Sequoia gaining ground from its neighbors. Here also I noted eighty-six young sequoias from one to fifty feet high on less than half an acre of ground that had been cleared and prepared for their reception by fire. This was a small bay

burned into dense chaparral, showing that fire, the great destroyer of tree life, is sometimes followed by conditions favorable for new growths. Sufficient fresh soil, however, is furnished for the constant renewal of the forest by the fall of old trees without the help of any other agent, — burrowing animals, fire, flood, landslip, etc., — for the ground is thus turned and stirred as well as cleared, and in every roomy, shady hollow beside the walls of upturned roots many hopeful seedlings spring up.

The largest, and as far as I know the oldest, of all the King's River trees that I saw is the majestic stump, already referred to, about a hundred and forty feet high, which above the swell of the roots is thirty-five feet and eight inches inside the bark, and over four thousand years old. It was burned nearly half through at the base, and I spent a day in chopping off the charred surface, cutting into the heart, and counting the wood-rings with the aid of a lens. I made out a little over four thousand without difficulty or doubt, but I was unable to get a complete count, owing to confusion in the rings where wounds had been healed over. Judging by what is left of it, this was a fine, tall, symmetrical tree nearly forty feet in diameter before it lost its bark. In the last sixteen hundred and seventy-two years the increase in diameter was ten feet. A short distance south of this forest lies a beautiful grove, now mostly included in the General Grant National Park. I found many shake-makers at work in it, access to these magnificent woods having been made easy by the old mill wagon-road. The Park is only two miles square, and the largest of its many fine

trees is the General Grant, so named before the date of my first visit, twenty-eight years ago, and said to be the largest tree in the world, though above the craggy bulging base the diameter is less than thirty feet. The Sanger Lumber Company owns nearly all the King's River groves outside the Park, and for many years the mills have been spreading desolation without any advantage.

One of the shake-makers directed me to an "old snag bigger 'n Grant." It proved to be a huge black charred stump thirty-two feet in diameter, the next in size to the grand monument mentioned above.

I found a scattered growth of Big Trees extending across the main divide to within a short distance of Hyde's Mill, on a tributary of Dry Creek. The mountain ridge on the south side of the stream was covered from base to summit with a most superb growth of Big Trees. What a picture it made! In all my wide forest wanderings I had seen none so sublime. Every tree of all the mighty host seemed perfect in beauty and strength, and their majestic domed heads, rising above one another on the mountain-slope, were most imposingly displayed, like a range of bossy upswelling cumulus clouds on a calm sky.

In this glorious forest the mill was busy, forming a sore, sad centre of destruction, though small as yet, so immensely heavy was the growth. Only the smaller and most accessible of the trees were being cut. The logs, from three to ten or twelve feet in diameter, were dragged or rolled with long strings of oxen into a chute and sent flying down the steep mountain-side to the mill

flat, where the largest of them were blasted into manageable dimensions for the saws. And as the timber is very brash, by this blasting and careless felling on uneven ground, half or three fourths of the timber was wasted.

I spent several days exploring the ridge and counting the annual wood-rings on a large number of stumps in the clearings, then replenished my bread sack and pushed on southward. All the way across the broad rough basins of the Kaweah and Tule rivers Sequoia ruled supreme, forming an almost continuous belt for sixty or seventy miles, waving up and down in huge massy mountain billows in compliance with the grand glacier-ploughed topography.

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 Big Trees 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 5000 to 8400 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 awe-stricken 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 appeared 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-crumb 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 wanting in the isolated groves north of King's 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 ledum and scarlet vaccinium. Around the margin there is first a fringe of azalea and willow bushes, colored orange yellow, 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 free man 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 doing? How did you get here?" I explained that I came across the cañons 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 provision 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 mean time 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 busily pre-

paring supper. In answer to inquiries concerning the distribution of the Big Trees he gave a good deal of particular information of the forest we were in, and he had heard that the species extended a long way south, he knew not how far. I wandered about for several days within a radius of six or seven miles of the camp, surveying boundaries, measuring trees, and climbing the highest points for general views. From the south side of the divide I saw telling ranks of sequoia-crowned headlands stretching far into the hazy distance, and plunging vaguely down into profound cañon depths foreshadowing weeks of good work. I had now been out on the trip more than a month, and I began to fear my studies would be interrupted by snow, for winter was drawing nigh. "Where there is n't a way make a way," is easily said when no way at the time is needed, but to the Sierra explorer with a mule traveling across the cañon lines of drainage the brave old phrase becomes heavy with meaning. There are ways across the Sierra graded by glaciers, well marked, and followed by men and beasts and birds, and one of them even by locomotives; but none natural or artificial along the range, and the explorer who would thus travel at right angles to the glacial ways must traverse cañons and ridges extending side by side in endless succession, roughened by side gorges and gulches and stubborn chaparral, and defended by innumerable sheer-fronted precipices. My own ways are easily made in any direction, but Brownie, though one of the toughest and most skillful of his race, was oftentimes discouraged for want of hands, and caused endless work. Wild at first, he was tame enough

now; and when turned loose he not only refused to run away, but as his troubles increased came to depend on me in such a pitiful, touching way, I became attached to him and helped him as if he were a good-natured boy in distress, and then the labor grew lighter. Bidding good-by to the kind sequoia cave-dweller, we vanished again in the wilderness, drifting slowly southward, sequoias on every ridge-top beckoning and pointing the way.

In the forest between the Middle and East forks of the Kaweah, I met a great 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 cañon 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 is the fire 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 feet of the trees, it runs up these bristly furrows in lovely pale-blue quivering, bick-

ering 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 in 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 bonfires where fifty or a hundred cords of peeled, split, smashed wood has been piled around some old giant by a single stroke of lightning is another grand sight in the night. The light is so great I found I could read common print three hundreds yards from them, and the illumination of the circle of onlooking 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 century or two of age. 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 fire-wood 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,

which 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-auger and have any shell rim left.

Fire attacks the large trees only at the ground, consuming the fallen leaves and humus at their feet, doing them but little harm unless considerable quantities of fallen limbs happen to be piled about them, their thick mail of spongy, unpitchy, almost unburnable bark affording strong protection. Therefore the oldest and most perfect unscarred trees are found on ground that is nearly level, while those growing on hillsides, against which falling branches roll, are always deeply scarred on

the upper side, and as we have seen are sometimes burned down. The saddest thing of all was to see the hopeful seedlings, many of them crinkled and bent with the pressure of winter snow, yet bravely aspiring at the top, helplessly perishing, and young trees, perfect spires of verdure and naturally immortal, suddenly changed to dead masts. Yet the sun looked cheerily down the openings in the forest roof, turning the black smoke to a beautiful brown, as if all was for the best.

Beneath the smoke-clouds of the suffering forest we again pushed southward, descending a side gorge of the East Fork cañon and climbing another into new forests and groves not a whit less noble. Brownie, the meanwhile, had been resting, while I was weary and sleepy with almost ceaseless wanderings, giving only an hour or two each night or day to sleep in my log home. Way-making here seemed to become more and more difficult, "impossible," in common phrase, for four-legged travelers. Two or three miles was all the day's work as far as distance was concerned. Nevertheless, just before sundown we found a charming camp-ground with plenty of grass, and a forest to study that had felt no fire for many a year. The camp-hollow was evidently a favorite home of bears. On many of the trees, at a height of six or eight feet, their autographs were inscribed in strong, free, flowing strokes on the soft bark where they had stood up like cats to stretch their limbs. Using both hands, every claw a pen, the handsome curved lines of their writing take the form of remarkably regular interlacing pointed arches, producing a truly ornamental effect. I looked and listened, half expecting

to see some of the writers alarmed and withdrawing from the unwonted disturbance. Brownie also looked and listened, for mules fear bears instinctively and have a very keen nose for them. When I turned him loose, instead of going to the best grass, he kept cautiously near the camp-fire for protection, but was careful not to step on me. The great starry night passed away in deep peace and the rosy morning sunbeams were searching the grove ere I awoke from a long, blessed sleep.

The breadth of the sequoia belt here is about the same as on the north side of the river, extending, rather thin and scattered in some places, among the noble pines from near the main forest belt of the range well back towards the frosty peaks, where most of the trees are growing on moraines but little changed as yet.

Two days' scramble above Bear Hollow I enjoyed an interesting interview with deer. Soon after sunrise a little company of four came to my camp in a wild garden imbedded in chaparral, and after much cautious observation quietly began to eat breakfast with me. Keeping perfectly still I soon had their confidence, and they came so near I found no difficulty, while admiring their graceful manners and gestures, in determining what plants they were eating, thus gaining a far finer knowledge and sympathy than comes by killing and hunting.

Indian summer gold with scarce a whisper of winter in it was painting the glad wilderness in richer and yet richer colors as we scrambled across the South cañon into the basin of the Tule. Here the Big Tree forests are still more extensive, and furnished abundance of work in tracing boundaries and gloriously crowned

ridges up and down, back and forth, exploring, studying, admiring, while the great measureless days passed on and away uncounted. But in the calm of the camp-fire the end of the season seemed near. Brownie too often brought snow-storms to mind. He became doubly jaded, though I never rode him, and always left him in camp to feed and rest while I explored. The invincible bread business also troubled me again; the last mealy crumbs were consumed, and grass was becoming scarce even in the roughest rock-piles, naturally inaccessible to sheep. One afternoon, as I gazed over the rolling bossy sequoia billows stretching interminably southward, seeking a way and counting how far I might go without food, a rifle-shot rang out sharp and clear. Marking the direction, I pushed gladly on, hoping to find some hunter who could spare a little food. Within a few hundred rods I struck the track of a shod horse, which led to the camp of two Indian shepherds. One of them was cooking supper when I arrived. Glancing curiously at me, he saw that I was hungry, and gave me some mutton and bread, and said encouragingly as he pointed to the west, "Putty soon Indian come, heap speak English." Toward sundown two thousand sheep beneath a cloud of dust came streaming through the grand sequoias to a meadow below the camp, and presently the English-speaking shepherd came in, to whom I explained my wants and what I was doing. Like most white men, he could not conceive how anything other than gold could be the object of such rambles as mine, and asked repeatedly whether I had discovered any mines. I tried to make him talk about trees and the

wild animals, but unfortunately he proved to be a tame Indian from the Tule Reservation, had been to school, claimed to be civilized, and spoke contemptuously of "wild Indians," and so of course his inherited instincts were blurred or lost. The Big Trees, he said, grew far south, for he had seen them in crossing the mountains from Porterville to Lone Pine. In the morning he kindly gave me a few pounds of flour, and assured me that I would get plenty more at a sawmill on the South Fork if I reached it before it was shut down for the season.

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. Turning 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 did n'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 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 cañons — 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 south of King's River only about seventy miles in length. But though the area occupied by the species increases so much to the southward, there is but little difference in the size of the trees. A diameter of twenty feet and height of two hundred and seventy-five is perhaps about the average for anything like ma-

ture 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 King's 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 post-glacial 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 not left 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 remnants 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 oncoming, 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 preëmption 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, when 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 King's 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, be-

tween 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 King's 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 we have pointed out between the distribution of the Big Tree and the ancient glacial 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 post-glacial 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 post-glacial 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 the 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 reëxtend 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 mill men. Even the beautiful little Calaveras Grove of ninety trees, 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 King's and Kern rivers, thus including the sublime scenery on the headwaters 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 are of much value to their 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.

BRADFORD TORREY

SCRAPING ACQUAINTANCE

As I was crossing Boston Common, some years ago, my attention was caught by the unusual behavior of a robin, who was standing on the lawn, absolutely motionless, and every few seconds making a faint hissing noise. So much engaged was he that, even when a dog ran near him, he only started slightly, and on the instant resumed his statue-like attitude. Wondering what this could mean, and not knowing how else to satisfy my curiosity, I bethought myself of a man whose letters about birds I had now and then noticed in the daily press. So, looking up his name in the City Directory, and finding that he lived at such a number, Beacon Street, I wrote him a note of inquiry. He must have been amused as he read it; for I remember giving him the title of "Esquire," and speaking of his communications to the newspapers as the ground of my application to him. "Such is fame!" he likely enough said to himself. "Here is a man with eyes in his head, a man, moreover, who has probably been at school in his time, — for most of his words are spelled correctly, — and yet he knows my name only as he has seen it signed once in a while to a few lines in a newspaper." Thoughts like these, however, did not prevent his replying to the note (my "valued favor") with all politeness, although he confessed himself unable to answer my question; and by the time I had occasion to trouble him again I had learned that

he was to be addressed as Doctor, and, furthermore, was an ornithologist of world-wide reputation, being, in fact, one of the three joint-authors of the most important work so far issued on the birds of North America.

Certainly I was and am grateful to him (he is now dead) for his generous treatment of my ignorance; but even warmer is my feeling toward that city thrush, who, all unconscious of what he was doing, started me that day on a line of study which has been ever since a continual delight. Most gladly would I do him any kindness in my power; but I have little doubt that, long ere this, he, too, has gone the way of all the earth. As to what he was thinking about on that memorable May morning, I am as much in the dark as ever. But there is no law against a bird's behaving mysteriously, I suppose. Most of us, I am sure, often do things which are inexplicable to ourselves, and once in a very great while, perhaps, it would puzzle even our next-door neighbors to render a complete account of our motives.

Whatever the robin meant, however, and no doubt there was some good reason for his conduct, he had given my curiosity the needed jog. Now, at last, I would do what I had often dreamed of doing, — learn something about the birds of my own region, and be able to recognize at least the more common ones when I saw them.

The interest of the study proved to be the greater for my ignorance, which, to speak within bounds, was nothing short of wonderful; perhaps I might appropriately use a more fashionable word, and call it phenomenal. All my life long I had had a kind of passion for being

out-of-doors; and, to tell the truth, I had been so often seen wandering by myself in out-of-the-way wood-paths, or sitting idly about on stone walls in lonesome pastures, that some of my Philistine townsmen had most likely come to look upon me as no better than a vagabond. Yet I was not a vagabond, for all that. I liked work, perhaps, as well as the generality of people. But I was unfortunate in this respect: while I enjoyed indoor work, I hated to be in the house; and, on the other hand, while I enjoyed being out-of-doors, I hated all manner of outdoor employment. I was not lazy, but I possessed — well, let us call it the true aboriginal temperament; though I fear that this distinction will be found too subtle, even for the well-educated, unless, along with their education, they have a certain sympathetic bias, which, after all, is the main thing to be depended on in such nice psychological discriminations.

With all my roving in wood and field, however, I knew nothing of any open-air study. Study was a thing of books. At school we were never taught to look elsewhere for knowledge. Reading and spelling, geography and grammar, arithmetic and algebra, geometry and trigonometry, — these were studied, of course, as also were Latin and Greek. But none of our lessons took us out of the school-room, unless it was astronomy, the study of which I had nearly forgotten; and that we pursued in the night-time, when birds and plants were as though they were not. I cannot recollect that any one of my teachers ever called my attention to a natural object. It seems incredible, but, so far as my memory serves, I was never in the habit of observing the return of the birds

in the spring or their departure in the autumn; except, to be sure, that the semi-annual flight of the ducks and geese was always a pleasant excitement, more especially because there were several lakes (invariably spoken of as ponds) in our vicinity, on the borders of which the village "gunners" built pine-branch booths in the season.

But now, as I have said, my ignorance was converted all at once into a kind of blessing; for no sooner had I begun to read bird books, and consult a cabinet of mounted specimens, than every turn out-of-doors became full of all manner of delightful surprises. Could it be that what I now beheld with so much wonder was only the same as had been going on year after year in these my own familiar lanes and woods? Truly the human eye is nothing more than a window, of no use unless the man looks out of it.

Some of the experiences of that period seem ludicrous enough in the retrospect. Only two or three days after my eyes were first opened I was out with a friend in search of wild-flowers (I was piloting him to a favorite station for *Viola pubescens*), when I saw a most elegant little creature, mainly black and white, but with brilliant orange markings. He was darting hither and thither among the branches of some low trees, while I stared at him in amazement, calling on my comrade, who was as ignorant as myself, but less excited, to behold the prodigy. Half trembling lest the bird should prove to be some straggler from the tropics, the like of which would not be found in the cabinet before mentioned, I went thither that very evening. Alas, my silly fears! there stood the little beauty's exact counterpart,

labeled *Setophaga ruticilla*, the American redstart, — a bird which the manual assured me was very common in my neighborhood.

But it was not my eyes only that were opened, my ears also were touched. It was as if all the birds had heretofore been silent, and now, under some sudden impulse, had broken out in universal concert. What a glorious chorus it was; and every voice a stranger! For a week or more I was puzzled by a song which I heard without fail whenever I went into the woods, but the author of which I could never set eyes on, — a song so exceptionally loud and shrill, and marked by such a vehement crescendo, that, even to my new-found ears, it stood out from the general medley a thing by itself. Many times I struck into the woods in the direction whence it came, but without getting so much as a flying glimpse of the musician. Very mysterious, surely! Finally, by accident I believe, I caught the fellow in the very act of singing, as he stood on a dead pine-limb; and a few minutes later he was on the ground, walking about (not hopping) with the primmest possible gait, — a small olive-brown bird, with an orange crown and a speckled breast. Then I knew him for the golden-crowned thrush; but it was not for some time after this that I heard his famous evening song, and it was longer still before I found his curious roofed nest.

“Happy those early days,” those days of childish innocence, — though I was a man grown, — when every bird seemed newly created, and even the redstart and the wood wagtail were like rarities from the ends of the earth. Verily, my case was like unto Adam’s,

when every fowl of the air was brought before him for a name.

One evening, on my way back to the city after an afternoon ramble, I stopped just at dusk in a grove of hemlocks, and soon out of the tree-top overhead came a song, — a brief strain of about six notes, in a musical but rather rough voice, and in exquisite accord with the quiet solemnity of the hour. Again and again the sounds fell on my ear, and as often I endeavored to obtain a view of the singer; but he was in the thick of the upper branches, and I looked for him in vain. How delicious the music was! a perfect lullaby, drowsy and restful; like the benediction of the wood on the spirit of a tired city-dweller. I blessed the unknown songster in return; and even now I have a feeling that the peculiar enjoyment which the song of the black-throated green warbler never fails to afford me may perhaps be due in some measure to its association with that twilight hour.

To this same hemlock grove I was in the habit, in those days, of going now and then to listen to the evening hymn of the veery, or Wilson thrush. Here, if nowhere else, might be heard music fit to be called sacred. Nor did it seem a disadvantage, but rather the contrary, when, as sometimes happened, I was compelled to take my seat in the edge of the wood, and wait quietly, in the gathering darkness, for vespers to begin. The veery's mood is not so lofty as the hermit's, nor is his music to be compared for brilliancy and fullness with that of the wood thrush; but, more than any other bird-song known to me, the veery's has, if I may say so, the accent of sanctity. Nothing is here of self-consciousness; nothing

of earthly pride or passion. If we chance to overhear it and laud the singer, that is our affair. Simple-hearted worshiper that he is, he has never dreamed of winning praise for himself by the excellent manner in which he praises his Creator, — an absence of thrift, which is very becoming in thrushes, though, I suppose, it is hardly to be looked for in human choirs.

And yet, for all the unstudied ease and simplicity of the veery's strain, he is a great master of *technique*. In his own artless way he does what I have never heard any other bird attempt: he gives to his melody all the force of harmony. How this unique and curious effect, this vocal double-stopping, as a violinist might term it, is produced, is not certainly known; but it would seem that it must be by an *arpeggio*, struck with such consummate quickness and precision that the ear is unable to follow it, and is conscious of nothing but the resultant chord. At any rate, the thing itself is indisputable, and has often been commented on.

Moreover, this is only half the veery's technical proficiency. Once in a while, at least, he will favor you with a delightful feat of ventriloquism; beginning to sing in single voice, as usual, and anon, without any noticeable increase in the loudness of the tones, diffusing the music throughout the wood, as if there were a bird in every tree, all singing together in the strictest time. I am not sure that all members of the species possess this power, and I have never seen the performance alluded to in print; but I have heard it when the illusion was complete, and the effect most beautiful.

Music so devout and unostentatious as the veery's

does not appeal to the hurried or the preoccupied. If you would enjoy it you must bring an ear to hear. I have sometimes pleased myself with imagining a resemblance between it and the poetry of George Herbert, — both uncared for by the world, but both, on that very account, prized all the more dearly by the few in every generation whose spirits are in tune with theirs.

This bird is one of a group of small thrushes called the *Hylocichlæ*, of which group we have five representatives in the Atlantic States: the wood thrush; the Wilson, or tawny thrush; the hermit; the olive-backed, or Swainson; and the gray-cheeked, or Alice's thrush. To the unpracticed eye the five all look alike. All of them, too, have the same glorious voice, so that the young student is pretty sure to find it a matter of some difficulty to tell them apart. Yet there are differences of coloration which may be trusted as constant, and to which, after a while, the eye becomes habituated; and, at the same time, each species has a song and call-notes peculiar to itself. One cannot help wishing, indeed, that he might hear the five singing by turns in the same wood. Then he could fix the distinguishing peculiarities of the different songs in his mind so as never to confuse them again. But this is more than can be hoped for; the listener must be content with hearing two, or at the most three, of the species singing together, and trust his memory to make the necessary comparison.

The song of the wood thrush is perhaps the most easily set apart from the rest, because of its greater compass of voice and bravery of execution. The Wilson's

song, as you hear it by itself, seems so perfectly characteristic that you fancy you can never mistake any other for it; and yet, if you are in northern New England only a week afterwards, you may possibly hear a Swainson (especially if he happens to be one of the best singers of his species, and, more especially still, if he happens to be at just the right distance away), who you will say, at first thought, is surely a Wilson. The difficulty of distinguishing the voices is naturally greatest in the spring, when they have not been heard for eight or nine months. Here, as elsewhere, the student must be willing to learn the same lesson over and over, letting patience have her perfect work. That the five songs are really distinguishable is well illustrated by the fact (which I have before mentioned) that the presence of the Alice thrush in New England during the breeding-season was announced as probable by myself, simply on the strength of a song which I had heard in the White Mountains, and which, as I believed, must be his, notwithstanding I was entirely unacquainted with it, and though all our books affirmed that the Alice thrush was not a summer resident of any part of the United States.

It is worth remarking, also, in this connection, that the *Hylocichla* differ more decidedly in their notes of alarm than in their songs. The wood thrush's call is extremely sharp and brusque, and is usually fired off in a little volley; that of the Wilson is a sort of whine, or snarl, in distressing contrast with his song; the hermit's is a quick, *sotto voce*, sometimes almost inaudible *chuck*; the Swainson's is a mellow whistle; while that of the Alice is something between the Swainson's and the Wil-

son's, — not so gentle and refined as the former, nor so outrageously vulgar as the latter.

In what is here said about discriminating species it must be understood that I am not speaking of such identification as will answer a strictly scientific purpose. For that the bird must be shot. To the maiden

“ whose bright blue eyes
Are tender over drowning flies,”

this decree will no doubt sound cruel. Men who pass laws of that sort may call themselves ornithologists, if they will; for her part she calls them butchers. We might turn on our fair accuser, it is true, with some inquiry about the two or three bird-skins which adorn her bonnet. But that would be only giving one more proof of our heartlessness; and, besides, unless a man is downright angry he can scarcely feel that he has really cleared himself when he has done nothing more than to point the finger and say, You're another. However, I am not set for the defense of ornithologists. They are abundantly able to take care of themselves without the help of any outsider. I only declare that, even to my unprofessional eye, this rule of theirs seems wise and necessary. They know, if their critics do not, how easy it is to be deceived; how many times things have been seen and minutely described, which, as was afterwards established, could not by any possibility have been visible. Moreover, regret it as we may, it is clear that in this world nobody can escape giving and taking more or less pain. We of the sterner sex are accustomed to think that even our blue-eyed censors are not entirely innocent

in this regard; albeit, for myself, I am bound to believe that generally they are not to blame for the tortures they inflict upon us.

Granting the righteousness of the scientist's caution, however, we may still find a less rigorous code sufficient for our own non-scientific, though I hope not unscientific, purpose. For it is certain that no great enjoyment of bird study is possible for some of us, if we are never to be allowed to call our gentle friends by name until in every case we have gone through the formality of a *post mortem* examination. Practically, and for everyday ends, we may know a robin, or a redstart, or even a hermit thrush, when we see him, without first turning the bird into a specimen.

Probably there are none of our birds which afford more surprise and pleasure to a novice than the family of warblers. A well-known ornithologist has related how one day he wandered into the forest in an idle mood, and accidentally catching a gleam of bright color overhead, raised his gun and brought the bird to his feet; and how excited and charmed he was with the wondrous beauty of his little trophy. Were there other birds in the woods as lovely as this? He would see for himself. And that was the beginning of what bids fair to prove a life-long enthusiasm.

Thirty-eight warblers are credited to New England; but it would be safe to say that not more than three of them are known to the average New-Englander. How should he know them, indeed? They do not come about the flower-garden like the hummingbird, nor about the lawn like the robin; neither can they be hunted with a

dog like the grouse and the woodcock. Hence, for all their gorgeous apparel, they are mainly left to students and collectors. Of our common species the most beautiful are, perhaps, the blue yellow-back, the blue golden-wing, the Blackburnian, the black and yellow, the Canada flycatcher, and the redstart; with the yellow-rump, the black-throated green, the prairie warbler, the summer yellowbird, and the Maryland yellow-throat coming not far behind. But all of them are beautiful, and they possess, besides, the charm of great diversity of plumage and habits; while some of them have the further merit, by no means inconsiderable, of being rare.

It was a bright day for me when the blue golden-winged warbler settled in my neighborhood. On my morning walk I detected a new song, and, following it up, found a new bird, — a result which is far from being a thing of course. The spring migration was at its height, and at first I expected to have the pleasure of my new friend's society for only a day or two; so I made the most of it. But it turned out that he and his companion had come to spend the summer, and before very long I discovered their nest. This was still unfinished when I came upon it; but I knew pretty well whose it was, having several times noticed the birds about the spot, and a few days afterwards the female bravely sat still, while I bent over her, admiring her courage and her handsome dress. I paid my respects to the little mother almost daily, but jealously guarded her secret, sharing it only with a kind-hearted woman, whom I took with me on one of my visits. But, alas! one day I called, only to find the nest empty. Whether

the villain who pillaged it traveled on two legs, or on four, I never knew. Possibly he dropped out of the air. But I wished him no good, whoever he was. Next year the birds appeared again, and more than one pair of them; but no nest could I find, though I often looked for it, and, as children say in their games, was sometimes very warm.

Is there any lover of birds in whose mind certain birds and certain places are not indissolubly joined? Most of us, I am sure, could go over the list and name the exact spots where we first saw this one, where we first heard that one sing, and where we found our first nest of the other. There is a piece of swampy woodland in Jefferson, New Hampshire, midway between the hotels and the railway station, which, for me, will always be associated with the song of the winter wren. I had been making an attempt to explore the wood, with a view to its botanical treasures; but the mosquitoes had rallied with such spirit that I was glad to beat a retreat to the road. Just then an unseen bird broke out into a song, and by the time he had finished I was saying to myself, A winter wren! Now, if I could only see him in the act, and so be sure of the correctness of my guess! I worked to that end as cautiously as possible, but all to no purpose; and finally I started abruptly toward the spot whence the sound had come, expecting to see the bird fly. But apparently there was no bird there, and I stood still, in a little perplexity. Then, all at once, the wren appeared, hopping about among the dead branches, within a few yards of my feet, and peering at the intruder with evident curiosity; and the next moment he

was joined by a hermit thrush, equally inquisitive. Both were silent as dead men, but plainly had no doubt whatever that they were in their own domain, and that it belonged to the other party to move away. I presumed that the thrush, at least, had a nest not far off, but after a little search (the mosquitoes were still active) I concluded not to intrude further on his domestic privacy. I had heard the wren's famous song, and it had not been overpraised. But then came the inevitable second thought: had I really heard it? True, the music possessed the wren characteristics and a winter wren was in the brush; but what proof had I that the bird and the song belonged together? No; I must see him in the act of singing. But this, I found, was more easily said than done. In Jefferson, in Gorham, in the Franconia Notch, in short, wherever I went, there was no difficulty about hearing the music, and little about seeing the wren; but it was provoking that eye and ear could never be brought to bear witness to the same bird. However, this difficulty was not insuperable, and after it was once overcome I was in the habit of witnessing the whole performance almost as often as I wished.

Of similar interest to me is a turn in an old Massachusetts road, over which, boy and man, I have traveled hundreds of times; one of those delightful back-roads, half road and half lane, where the grass grows between the horse-track and the wheel-track, while bushes usurp what ought to be the sidewalk. Here, one morning in the time when every day was disclosing two or three new species for my delight, I stopped to listen to some bird of quite unsuspected identity, who was calling and sing-

ing and scolding in the Indian brier thicket, making, in truth, a prodigious racket. I twisted and turned, and was not a little astonished when at last I detected the author of all this outcry. From a study of the manual I set him down as probably the white-eyed vireo, — a conjecture which further investigation confirmed. This vireo is the very prince of stump-speakers, — fluent, loud, and sarcastic, — and is well called the politician, though it is a disappointment to learn that the title was given him, not for his eloquence, but on account of his habit of putting pieces of newspaper into his nest. While I stood peering into the thicket, a man whom I knew came along the road, and caught me thus disreputably employed. Without doubt he thought me a lazy good-for-nothing; or possibly (being more charitable) he said to himself, "Poor fellow! he's losing his mind."

Take a gun on your shoulder, and go wandering about the woods all day long, and you will be looked upon with respect, no matter though you kill nothing bigger than a chipmunk; or stand by the hour at the end of a fishing-pole, catching nothing but mosquito-bites, and your neighbors will think no ill of you. But to be seen staring at a bird for five minutes together, or picking roadside weeds! — well, it is fortunate there are asylums for the crazy. Not unlikely the malady will grow upon him; and who knows how soon he may become dangerous? Something must be wrong about that to which we are unaccustomed. Blowing out the brains of rabbits and squirrels is an innocent and delightful pastime, as every body knows; and the delectable excitement of pulling half-grown fishes out of the pond to perish miserably on

the bank, that, too, is a recreation easily enough appreciated. But what shall be said of enjoying birds without killing them, or of taking pleasure in plants, which, so far as we know, cannot suffer even if we do kill them?

Of my many pleasant associations of birds with places, one of the pleasantest is connected with the red-headed woodpecker. This showy bird has for a good many years been very rare in Massachusetts; and therefore, when, during the freshness of my ornithological researches, I went to Washington for a month's visit, it was one of the things which I had especially in mind to make his acquaintance. But I looked for him without success, till, at the end of a fortnight, I made a pilgrimage to Mount Vernon. Here, after visiting the grave, and going over the house, as every visitor does, I sauntered about the grounds, thinking of the great man who used to do the same so many years before, but all the while keeping my eyes open for the present feathered inhabitants of the sacred spot. Soon a bird dashed by me, and struck against the trunk of an adjacent tree, and glancing up quickly, I beheld my much-sought red-headed woodpecker. How appropriately patriotic he looked, at the home of Washington, wearing the national colors, — red, white, and blue! After this he became abundant about the capital, so that I saw him often, and took much pleasure in his frolicsome ways; and, some years later, he suddenly appeared in force in the vicinity of Boston, where he remained through the winter months. To my thought, none the less, he will always suggest Mount Vernon. Indeed, although he is certainly rather jovial, and even giddy, he is to me the bird

of Washington much more truly than is the solemn, stupid-seeming eagle who commonly bears that name.

To go away from home, even if the journey be no longer than from Massachusetts to the District of Columbia, is sure to prove an event of no small interest to a young naturalist; and this visit of mine to the national capital was no exception. On the afternoon of my arrival, walking up Seventh Street, I heard a series of loud, clear, monotonous whistles, which I had then no leisure to investigate, but the author of which I promised myself the satisfaction of meeting at another time. In fact, I think it was at least a fortnight before I learned that these whistles came from the tufted titmouse. I had been seeing him almost daily, but till then he had never chanced to use that particular note while under my eye.

There was a certain tract of country, woodland and pasture, over which I roamed a good many times, and which is still clearly mapped out in my memory. Here I found my first Carolina or mocking wren, who ran in at one side of a woodpile and came out at the other as I drew near, and who, a day or two afterwards, sang so loudly from an oak tree that I ransacked it with my eye in search of some large bird, and was confounded when finally I discovered who the musician really was. Here, every day, were to be heard the glorious song of the cardinal grosbeak, the insect-like effort of the blue-gray gnat-catcher, and the rigmarole of the yellow-breasted chat. On a wooded hillside, where grew a profusion of trailing arbutus, pink azalea, and bird-foot violets, the rowdyish great crested flycatchers were screaming in the tree-tops. In this same grove I twice saw the rare red-

bellied woodpecker, who, on both occasions, after rapping smartly with his beak, turned his head and laid his ear against the trunk, evidently listening to see whether his alarm had set any grub a-stirring. Near by, in an undergrowth, I fell in with a few worm-eating warblers. They seemed of a peculiarly unsuspecting turn of mind, and certainly wore the quaintest of head-dresses. I must mention also a scarlet tanager, who, all afire as he was, one day alighted in a bush of flowering dogwood, which was completely covered with its large white blossoms. Probably he had no idea how well his perch became him.

Perhaps I ought to be ashamed to confess it, but, though I went several times into the galleries of our honorable Senate and House of Representatives, and heard speeches by some celebrated men, including at least half a dozen candidates for the presidency, yet, after all, the congressmen in feathers interested me most. I thought, indeed, that the chat might well enough have been elected to the lower house. His volubility and wag-gish manners would have made him quite at home in that assembly, while his orange-colored waistcoat would have given him an agreeable conspicuity. But, to be sure, he would have needed to learn the use of tobacco.

Well, all this was only a few years ago; but the men whose eloquence then drew the crowd to the Capitol are, many of them, heard there no longer. Some are dead; some have retired to private life. But the birds never die. Every spring they come trooping back for their all-summer session. The turkey-buzzard still floats majestically over the city; the chat still practices his lofty

tumbling in the suburban pastures, snarling and scolding at all comers; the flowing Potomac still yields "a blameless sport" to the fish crow and the kingfisher; the orchard oriole continues to whistle in front of the Agricultural Department, and the crow blackbird to parade back and forth over the Smithsonian lawns. Presidents and senators may come and go, be praised and vilified, and then in turn forgotten; but the birds are subject to no such mutations. It is a foolish thought, but sometimes their happy carelessness seems the better part.

AN OLD ROAD

I FALL in with persons, now and then, who profess to care nothing for a path when walking in the woods. They do not choose to travel in other people's footsteps, — nay, nor even in their own, — but count it their mission to lay out a new road every time they go afield. They are welcome to their freak. My own genius for adventure is less highly developed; and, to be frank, I have never learned to look upon affectation and whim as synonymous with originality. In my eyes, it is nothing against a hill that other men have climbed it before me; and if their feet have worn a trail, so much the better. I not only reach the summit more easily, but have company on the way, — company none the less to my mind, perhaps, for being silent and invisible. It is well enough to strike into the trackless forest once in a while; to wander you know not whither, and come out you know not where; to lie down in a strange place, and for an hour imagine yourself the explorer of a new continent: but if the mind be awake (as, alas, too often it is not), you may walk where you will, in never so well known a corner, and you will see new things, and think new thoughts, and return to your house a new man, which, I venture to believe, is after all the main consideration. Indeed, if your stirring abroad is to be more than mere muscular exercise, you will find a positive advantage in making use of some well-worn and familiar path.

The feet will follow it mechanically, and so the mind — that is, the walker himself — will be left undistracted. That, to my thinking, is the real tour of discovery wherein one keeps to the beaten road, looks at the customary sights, but brings home a new idea.

There are inward moods, as well as outward conditions, in which an old, half-disused, bush-bordered road becomes the saunterer's paradise. I have several such in my eye at this moment, but especially one, in which my feet, years ago, grew to feel at home. It is an almost ideal loitering place, or would be, if only it were somewhat longer. How many hundreds of times have I traveled it, spring and summer, autumn and winter! As I go over it now, the days of my youth come back to me, clothed all of them in that soft, benignant light which nothing but distance can bestow, whether upon hills or days. This gracious effect is heightened, no doubt, by the fact that for a good while past my visits to the place have been only occasional. Memory and imagination are true yoke-fellows, and between them are always preparing some new pleasure for us, as often as we allow them opportunity. The other day, for instance, as I came to the top of the hill just beyond the river, I turned suddenly to the right, looking for an old pear tree. I had not thought of it for years, and the more I have since tried to recall its appearance and exact whereabouts, the less confident have I grown that it ever had any material existence; but somehow, just at that moment my mouth seemed to recollect it; and in general I have come to put faith in such involuntary and, if I may say so, sensible joggings of the memory. I wonder

whether the tree ever was there — or anywhere. At all events, the thought of it gave me for the moment a pleasure more real than any taste in the mouth, were it never so sweet. Thank fortune, imaginative delights are as far as possible from being imaginary.

The river just mentioned runs under the road, and, as will readily be inferred, is one of its foremost attractions. I speak of it as a "river" with some misgivings. It is a rather large brook, or a very small river; but a man who has never been able to leap across it has perhaps no right to deny it the more honorable appellation. Its source is a spacious and beautiful sheet of water, which heretofore has been known as a "pond," but which I should be glad to believe would hereafter be put upon the maps as Lake Wessagusset. This brook or river, call it whichever you please, goes meandering through the township in a northeasterly direction, turning the wheels of half a dozen mills, more or less, on its way; a sluggish stream, too lazy to work, you would think; passing much of its time in flat, grassy meadows, where it idles along as if it realized that the end of its course was near, and felt in no haste to lose itself in the salt sea. Out of this stream I pulled goodly numbers of perch, pickerel, shiners, flatfish, and hornpouts, while I was still careless-hearted enough ("Heaven lies about us in our infancy") to enjoy this very amiable and semi-religious form of "sport;" and as the river intersects at least seven roads that came within my boyish beat, I must have crossed it thousands of times; in addition to which I have spent days in paddling and bathing in it. Altogether, it is one of my most familiar friends; and —

what one cannot say of all familiar friends — I do not remember that it ever served me the slightest ill-turn. It passes under the road of which I am now discoursing, in a double channel (the bridge being supported midway by a stone wall), and then broadens out into an artificial shallow, through which travelers may drive if they will, to let their horses drink out of the stream. First and last, I have improved many a shining hour on this bridge leaning industriously over the railing. I can see the rocky bed at this moment, — yes, and the very shade and position of some of the stones, as I saw them thirty years ago; especially of one, on which we used to balance ourselves to dip up the water or to peer under the bridge. In those days, if we essayed to be uncommonly adventurous, we waded through this low and somewhat dark passage; a gruesome proceeding, as we were compelled to stoop a little, short as we were, to save our heads, while the road, to our imagination, seemed in momentary danger of caving in upon us. Courage, like all other human virtues, is but a relative attribute. Possibly the heroic deeds upon which in our grown-up estate we plume ourselves are not greatly more meritorious or wonderful than were some of the childish ventures at the recollection of which we now condescend to feel amused.

On the surface of the brook flourished two kinds of insects, whose manner of life we never tired of watching. One sort had long, wide-spreading legs, and by us were known as “skaters,” from their movements (to this day, I blush to confess, I have no other name for them); the others were flat, shining, orbicular or oblong, lead-col-

ored bugs, — “lucky-bugs” I have heard them called, — and lay flat upon the water, as if quite without limbs; but they darted over the brook, and even against the current, with noticeable activity, and doubtless were well supplied with paddles. Once in a while we saw a fish here, but only on rare occasions. The great unfailing attraction of the place, then as now, was the flowing water, forever spending and never spent. The insects lived upon it; apparently they had no power to leave it for an instant; but they were not carried away by it. Happy creatures! We, alas, sporting upon the river of time, can neither dive below the surface nor mount into the ether, and, unlike the insects (“lucky bugs,” indeed!), we have no option but to move with the tide. We have less liberty than the green flags, even, which grow in scattered tufts in the bed of the brook; whose leaves point forever down-stream, like so many index fingers, as if they said, “Yes, yes, that is the way to the sea; that way we all must go;” while for themselves, nevertheless, they manage to hold on by their roots, victorious even while professing to yield.

To my mind the river is alive. Reason about it as I will, I never can make it otherwise. I could sooner believe in water nymphs than in many existences which are commonly treated as much more certain matters of fact. I *could* believe in them, I say; but in reality I do not. My communings are not with any haunter of the river, but with the living soul of the river itself. It lags under the vine-covered alders, hastens through the bridge, then slips carelessly down a little descent, where it breaks into singing, then into a mill-pond and out

again, and so on and on, through one experience after another; and all the time it is not dead water, but a river, a thing of life and motion. After all, it is not for me to say what is alive and what dead. As yet, indeed, I do not so much as know what life is. In certain moods, in what I fondly call my better moments, I feel measurably sure of being alive myself; but even on that point, for aught I can tell, the brook may entertain some private doubts.

Just beyond the bridge is an ancient apple orchard. This was already falling into decay when I was a boy, and the many years that have elapsed since then have nearly completed its demolition; although I dare say the present generation of schoolboys still find it worth while to clamber over the wall, as they journey back and forth. Probably it will be no surprise to the owner of the place if I tell him that before I was twelve years old I knew the taste of all his apples. In fact, the orchard was so sequestered, so remote from any house, — especially from its proprietor's, — that it hardly seemed a sin to rob it. It was not so much an orchard as a bit of woodland; and besides, we never shook the trees, but only helped ourselves to windfalls; and it must be a severe moralist who calls *that* stealing. Why should the fruit drop off, if not to be picked up? In my time, at all events, such appropriations were never accounted robbery, though the providential absence of the owner was unquestionably a thing to be thankful for. He would never begrudge us the apples, of course, for he was rich and presumably generous; but it was quite as well for him to be somewhere else while we were gathering up

these favors which the winds of heaven had shaken down for our benefit. There is something of the special pleader in most of us, it is to be feared, whether young or old. If we are put to it, we can draw a very fine distinction (in our own favor), no matter how obtuse we may seem on ordinary occasions.

Remembering how voracious and indiscriminating my juvenile appetite was, I cannot help wondering that I am still alive, — a feeling which I doubt not is shared by many a man who, like myself, had a country bringing-up. We must have been born with something more than a spark of life, else it would certainly have been smothered long ago by the fuel so recklessly heaped upon it. But we lived out-of-doors, took abundant exercise, were not studious overmuch (as all boys and girls are charged with being nowadays), and had little to worry about, which may go far to explain the mystery.

It provokes a smile to reckon up the many places along this old road that are indissolubly connected in my mind with the question of something to eat. At the foot of the orchard just now spoken of, for example, is a dilapidated stone wall, between it and the river. Over this, as well as over the bushes beside it, straggled a small wild grape-vine, bearing every year a scanty crop of white grapes. These, to our unsophisticated palates, were delicious, if only they got ripe. That was the rub; and as a rule we gathered our share of them (which was all there were) while they were yet several stages short of that desirable consummation, not deeming it prudent to leave them longer, lest some hungrier soul should get the start of us. Graping, as we called it, was one of our

regular autumn industries, and there were few vines within the circle of our perambulations which did not feel our fingers tugging at them at least once a year. Some of them hung well over the river; others took refuge in the tops of trees; but by hook or by crook, we usually got the better of such perversities. No doubt the fruit was all bad enough; but some of it was sweeter (or less sour) than other. Perhaps the best vine was one that covered a certain superannuated apple tree, half a mile west of our river-side orchard, before mentioned. Here I might have been seen by the hour, eagerly yet cautiously venturing out upon the decayed and doubtful limbs, in quest of this or that peculiarly tempting bunch. These grapes were purple (how well some things are remembered!), and were sweeter then than Isabellas or Catawbas are now. Such is the degeneracy of vines in these modern days!

Altogether more important than the grapes were the huckleberries, for which, also, we four times out of five took this same famous by-road. Speaking roughly, I may say that we depended upon seven pastures for our supplies, and were accustomed to visit them in something like regular order. It is kindly provided that huckleberry bushes have an exceptionally strong tendency to vary. We possessed no theories upon the subject, and knew nothing of disputed questions about species and varieties; but we were not without a good degree of practical information. Here was a bunch of bushes, for instance, covered with black, shiny, pear-shaped berries, very numerous, but very small. They would do moderately well in default of better. Another patch, perhaps

but a few rods removed, bore large globular berries, less glossy than the others, but still black. These, as we expressed it, "filled up" much faster than the others, though not nearly so "thick." Blue berries (not blueberries, but blue huckleberries) were common enough, and we knew one small cluster of plants the fruit of which was white, a variety that I have since found noted by Doctor Gray as very rare. Unhappily, this freak made so little impression upon me as a boy that while I am clear as to the fact, and feel sure of the pasture, I have no distinct recollection of the exact spot where the eccentric bushes grew. I should like to know whether they still persist. Gray's Manual, by the way, makes no mention of the blue varieties, but lays it down succinctly that the fruit of *Gaylussacia resinosa* is black.

The difference we cared most about, however, related not to color, shape, or size, but to the time of ripening. Diversity of habit in this regard was indeed a great piece of good fortune, not to be rightly appreciated without horrible imaginings of how short the season of berry pies and puddings would be if all the berries matured at once. You may be sure we never forgot where the early sorts were to be found, and where the late. What hours upon hours we spent in the broiling sun, picking into some half-pint vessel, and emptying that into a larger receptacle, safely stowed away under some cedar tree or barberry-bush. How proud we were of our heaped-up pails! How carefully we discarded from the top every half-ripe or otherwise imperfect specimen! (So early do well-taught Yankee children develop one qualification for the diaconate.) The sun had certain minor errands

to look after, we might have admitted, even in those midsummer days, but his principal business was to ripen huckleberries. So it seemed then. And now — well, men are but children still, and for them, too, their own little round is the centre of the world.

All these pastures had names, of course, well understood by us children, though I am not sure how generally they would have been recognized by the townspeople. The first in order was River Pasture, the owner of which turned his cattle into it, and every few years mowed the bushes, with the result that the berries, whenever there were any, were uncommonly large and handsome. Not far beyond this (the entrance was through a “pair of bars,” beside a spreading white oak) was Millstone Pasture. This was a large, straggling place, half pasture, half wood, full of nooks and corners, with by-paths running hither and thither, and named after two large bowlders, which lay one on top of the other. We used to clamber upon these to eat our luncheon, thinking within ourselves, meanwhile, that the Indians must have been men of prodigious strength. At that time, though I scarcely know how to own it, glacial action was a thing by us unheard of. We are wiser now, — on that point, at any rate. Two of the other pastures were called respectively after the railroad and a big pine tree (there *was* a big pine tree in W—— once, for I myself have seen the stump), while the remainder took their names from their owners, real or reputed; and as some of these appellations were rather disrespectfully abbreviated, it may be as well to omit setting them down in print.

To all these places we resorted a little later in the season for blackberries, and later still for barberries. In one or two of them we set snares, also, but without materially lessening the quantity of game. The rabbits, especially, always helped themselves to the bait, and left us the noose. At this distance of time I do not begrudge them their good fortune. I hope they are all alive yet, including the youngster that we once caught in our hands and brought home, and then, in a fit of contrition, carried back again to its native heath.

All in all, the berries that we prized most, perhaps, were those that came first, and were at the same time least abundant. Yankee children will understand at once that I mean the checkerberries, or, as we were more accustomed to call them, the boxberries. The very first mild days in March, if the snow happened to be mostly gone, saw us on this same old road bound for one of the places where we thought ourselves most likely to find a few (possibly a pint or two, but more probably a handful or two) of these humble but spicy fruits. Not that the plants were not plentiful enough in all directions, but it was only in certain spots (or rather in very *uncertain* spots, since these were continually shifting) that they were ever in good bearing condition. We came after a while to understand that the best crops were produced for two or three years after the cutting off of the wood in suitable localities. Letting in the sunlight seems to have the effect of starting into sudden fruitfulness this hardy, persistent little plant, although I never could discover that it thrived better for growing permanently in an open, sunny field. Perhaps it

requires an unexpected change of condition, a providential nudge, as it were, to jog it into activity, like some poets. Whatever the explanation, we used now and then in recent clearings (and nowhere else) to find the ground fairly red with berries. Those were red-letter days in our calendar. How handsome such a patch of rose-color was (though we made haste to despoil it), circling an old stump or a bowlder! The berries were pleasant to the eye and good for food; but after all, their principal attractiveness lay in the fact that they came right upon the heels of winter. They were the first-fruits of the new year (ripened the year before, to be sure), and to our thinking were fit to be offered upon any altar, no matter how sacred.

I have called the subject of my loving meditations a by-road. Formerly it was the main thoroughfare between two villages, but shortly after my acquaintance with it began a new and more direct one was laid out. Yet the old road, half deserted as it is, has not altogether escaped the ruthless hand of the improver. Within my time it has been widened throughout, and in one place a new section has been built to cut off a curve. Fortunately, however, the discarded portion still remains, well grown up to grass, and closely encroached upon by willows, alders, sumachs, barberries, dogwoods, smilax, clethra, azalea, button-bush, birches, and what not, yet still passable even for carriages, and more inviting than ever to lazy pedestrians like myself. On this cast-off section is a cosy, grassy nook, shaded by a cluster of red cedars. This was one of our favorite way-stations on summer noons. It gives me a comfortable,

restful feeling to look into it even now, as if my weary limbs had reminiscences of their own connected with the place.

Right at this point stands an ancient russet apple tree, which seems no older and brings forth no smaller apples now than it did when I first knew it. How natural it looks in every knot and branch! Strange, too, that it should be so, since I do not recall its ever contributing the first mouthful to my pleasures as a schoolboy gastronomer. In those times I judged a tree solely by the New Testament standard, very literally interpreted,—“By their fruits ye shall know them.” Now I have other tests, and can value an old acquaintance of this kind for its picturesqueness, though its apples be bitter as wormwood.

I am making too much of the food question, and will therefore say nothing of strawberries, raspberries, thimbleberries, cranberries (which last were delicious, as we took them out of their icy ovens in the spring), pignuts, hazelnuts, acorns, and the rest. Yet I will not pass by a small clump of dangleberry bushes (a September luxury not common in our neighborhood) and a lofty pear tree. The latter, in truth, hardly belongs under this head; for though it bore superabundant crops of pears, not even a child was ever known to eat one. We called them iron pears, perhaps because nothing but the hottest fire could be expected to reduce them to a condition of softness. My mouth is all in a pucker at the mere thought of the rusty-green bullets. It did seem a pity they should be so outrageously hard, so absolutely un-toothsome; for the tree, as I say, was a big one and pro-

vokingly prolific, and, moreover, stood squarely upon the roadside. What a godsend we should have found it, had its fruit been a few degrees less stony! Such incongruities and disappointments go far to convince me that the creation is indeed, as some theologians have taught, under a curse.

My appetite for wild fruits has grown dull with age, but meanwhile my affection for the old road has not lessened, but rather increased. In itself the place is nowise remarkable, a common country back road (its very name is Back Street); but all the same I "take pleasure in its stones, and favor the dust thereof." There are none of us so matter-of-fact and unsentimental, I hope, as never to have experienced the force of old associations in gilding the most ordinary objects. For my own part, I protest, I would give more for a single stunted cluster of orange-red berries from a certain small vine of Roxbury wax-work, near the entrance to Millstone Pasture aforesaid, than for a bushel of larger and handsomer specimens from some alien source. This old vine still holds on, I am happy to see, though it appears to have made no growth in twenty years. Long may it be spared! It was within a few rods of it, beside the path that runs into the pasture, that I shot my first bird. Newly armed with a shotgun, and on murder bent, I turned in here; and as luck would have it, there sat the innocent creature in a birch. The temptation was too great. There followed a moment of excitement, a nervous aim, a bang, and a catbird's song was hushed forever. A mean and cruel act, which I confess with shame, and have done my best to atone for by speaking here and there a good word for

this poorly appreciated member of our native choir. I should be glad to believe that the schoolboys of the present day are more tender-hearted than those with whom I mixed; but I am not without my doubts. As Darwin showed, all animals in the embryonic stage tend to reproduce ancestral characteristics; and our Anglo-Saxon ancestors (how easy it seems to believe it!) were barbarians.

This same Millstone Pasture, by the bye, was a place of special resort at Christmas time. Here grew plenty of the trailing plant which we knew simply as "evergreen," but which now, in my superior wisdom, I call *Lycopodium complanatum*. This, indeed, was common in various directions, but the holly was much less easily found, and grew here more freely than anywhere else. The unhappy trees had a hard shift to live, so broken down were they with each recurring December; and the more berries they produced, the worse for them. Their anticipations of Christmas must have been strangely different from those of us toy-loving, candy-eating children. But who thinks of sympathizing with a tree?

As for the wayside flowers, they are, as becomes the place, of the very commonest and most old-fashioned sorts, more welcome to my eye than the choicest of rarities: goldenrods and asters in great variety and profusion, hardhack and meadow-sweet, St. John's-wort and loosestrife, violets and anemones, self-heal and cranesbill, and especially the lovely but little-known purple gerardia. These, with their natural companions and allies, make to me a garden of delights, whereunto my feet, as far as they find opportunity, do continually

resort. What flowers ought a New-Englander to love, if not such as are characteristic of New England?

And yet, proudly and affectionately as I talk of it, Back Street is not what it once was. I have already mentioned the straightening, as also the widening, both of them sorry improvements. Furthermore, there was formerly a huge (as I remember it) and beautifully proportioned hemlock tree, at which I used to gaze admiringly in the first years of my wandering hither. What millions of tiny cones hung from its pendulous branches! The magnificent creation should have been protected by legislative enactment, if necessary; but no, almost as long ago as I can remember, long before I attained to grammar-school dignities, the owner of the land (so he thought himself, no doubt) turned the tree into firewood. And worse yet, the stately pine grove that flourished across the way, with mossy bowlders underneath and a most delightful density of shade, — this, too, like the patriarchal hemlock, has been cut off in the midst of its usefulness.

“Their very memory is fair and bright,
And my sad thoughts doth cheer!”

Now there is nothing on the whole hillside but a thicket of young hard-wood trees (I would say deciduous, but in New England, alas, all trees are deciduous), through which my dog loves to prowl, but which warns me to keep the road. Such devastations are not to be prevented, I suppose, but at least there is no law against my bewailing them.

Even in its present decadence, however, my road, as

I said to begin with, is a kind of saunterer's paradise. When we come to particulars, indeed, it is nothing to boast of; but waiving particulars, and taking it for all in all, there is no highway upon the planet where I better enjoy an idle hour. There is a boy of perhaps ten years whose companionship is out of all reason dear to me; and nowhere am I surer to find him at my side, hand in hand, than in this same lonely road, although I know very well that those who meet or pass me here see only one person, and that a man of several times ten years. But, thank Heaven, we are not always alone when we seem to be.

DALLAS LORE SHARP