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Rambles of a Botanist Among the Plants and Climates of California

John Muir

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Horticulture.

RAMBLES OF A BOTANIST AMONG THE PLANTS AND CLIMATES OF CALIFORNIA.

With reference to sight-seeing on the Pacific coast, our so-called transcontinental railroad is a big gun; charged with steam and cars it belches many a tourist against the targets of the golden State,—geysers, big trees, Yosemite, &c., among which they bump and ricochet, and rebound to their Atlantic homes, bruised and blurred, their memories made up of a motley jam of cascades and deserts and mountain domes, each traveller voluntarily compacting himself into the fastest cartridge of car and coach, as if resolved to see little as possible.

Last year tourists were whizzed over plain and mountain from San Francisco to Yosemite in two days; and I learn that arrangements are being made for next season whereby the velocity of the shot will be increased to one day. Thus is modern travel spiritualized. Thus are time and space—and travellers—annihilated.

I have lived in Yosemite Valley three years, and have never met a single traveller who had seen the Great Central Plain of California in flower-time; it is almost universally remembered as a scorched and dust-clouded waste, treeless and drear as the deserts of Utah. This magnificent plain is slandered; scarce any of its beauty is known, even to Californians; and we are therefore eager to speak in its praise, all the more because its plant inhabitants are so fast disappearing beneath gang-plows and trampling hoofs of flocks and herds.

On the second day of April, 1868, I left San Francisco for Yosemite Valley, companioned by a young Englishman. Our orthodox route of "nearest and quickest" was by steam to Stockton, thence by stage to Coulterville or Mariposa, and the remainder of the way over the mountains on horseback. But we had plenty of time, and proposed drifting leisurely mountainward, via the valley of San José, Pacheco Pass, and the plain of San Joaquin, and thence to Yosemite by any road that we chanced to find; enjoying the flowers and light, "camping out" in our blankets wherever overtaken by night, and paying very little compliance to roads or times. Accordingly, we crossed "the Bay" by the Oakland ferry, and proceeded up the valley of San José. This is one of the most fertile of the many small valleys of the coast; its rich bottoms are filled with wheat-fields and orchards and vineyards, and alfalfa meadows. It was now spring-time, and the weather was the best that we ever enjoyed. Larks and streams sang everywhere; the sky was cloudless, and the whole valley was a lake of light. The atmosphere was spicy and exhilarating; my companion
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acknowledging over his national pre-judices that it was the best he ever breathed, — more deliciously fragrant than the hawthorn hedges of England. This San José sky was not simply pure and bright, and mixed with plenty of well-tempered sunshine, but it possessed a positive flavor, — a taste, that thrilled from the lungs throughout every tissue of the body; every inspiration yielded a corresponding well-defined piece of pleasure, that awakened thousands of new palates everywhere. Both my companion and myself had lived and dozed on common air for nearly thirty years, and never before this discovered that our bodies contained such multitudes of palates, or that this mortal flesh, so little valued by philosophers and teachers, was possessed of so vast a capacity for happiness.

We emerged from this ether baptism new creatures, born again; and truly not until this time were we fairly conscious that we were born at all. Never more, thought I, as we strode forward at faster speed, never more shall I sentimentalize about getting out of the mortal coil: this flesh is not a coil; it is a sponge steeped in immortality.

The foothills (that form the sides of our blessed font) are in near view all the way to Gilroy; those of the Monte Diablo range on our left, those of Santa Cruz on our right; they are smooth and flowing, and come down to the bottom levels in curves of most surpassing beauty; they still wear natural flowers, which do not occur singly or in handfuls, scattered about in the grass, but they grow close together, in smooth, cloud-shaped companies, acres and hill-sides in size, white, purple, and yellow, separate, yet blending to each other like the hills upon which they grow. Besides the white, purple, and yellow clouds, we occasionally saw a thicket of scarlet castilleias and silvery-leaved lupines, also splendid fields of wild oats (Avena sativa). The delightful Gilia (G. tricolor) was very abundant in sweeping hill-side sheets, and a Leptosiphon (L. androsa) and Claytonias were everywhere by the road-sides, and lilies and dodecatheons by the streams: no wonder the air was so good, waving and rubbing on such a framework of flowers! I tried to decide which of the plant-clouds was most fragrant: perhaps it was the white, composed mostly of a delicate Boraginaceous; but doubtless all had a hand in balming the sky. Among trees we observed the laurel (Oreodaphne Californica), and magnificent groves and tree-shaped groups of oaks, some specimens over seven feet in diameter; the white oaks (Quercus lobata) and (Q. Douglasii), the black oak (Q. sonomensis), live-oak (Q. agriformis), together with several dwarfy species on the hills, whose names we do not know. The prevailing northwest wind has permanently swayed all unsheltered trees up the valley; groves upon the more exposed hill-sides lean forward like patches of lodged wheat. The Santa Cruz Mountains have grand forests of red-wood (Sequoia sempervirens), some specimens near fifty feet in circumference.

The Pacheco Pass was scarcely less enchanting than the valley. It resounded with crystal waters, and the loud shouts of thousands of California quails. In size these about equal the eastern quail; not quite so plump in form. The male has a tall, slender crest, wider at top than bottom, which he can hold straight up, or droop backward on his neck, or forward over his bill, at pleasure; and,
I

instead of Bob White, he shouts “pe-
check-a,” bearing down with a stiff, obstinate emphasis on “check.”

Through a considerable portion of the pass the road bends and mazes along the groves of a stream, or down in its pebbly bed, leading one now deep in the shadows of dogwoods and alders, then out in the light, through dry chaparral, over green carex meadows banked with violets and ferns, and dry, plantless flood-beds of gravel and sand.

We found ferns in abundance all through the pass. Some far down in dark canons, as the polypodium and rock fern, or high on sunlit braes, as Pellaea mucronata. Also we observed the delicate gold-powdered Gymno-
gramma triangularis, and Pellaea an-
dromedafolia, and the maidenhair (Adiantum chilense), and the broad-
shouldered bracken (Pteris aquilina), which is everywhere; and an aspidi-
um and cystopteris, and two or three others that I was not acquainted with. Also in this rich garden pass we gathered many fine grasses and carices, and brilliant pentstemons, azure and scarlet, and mints and lilies, and scores of others, strangers to us, but beautiful and pure as ever en-
joyed the sun or shade of a mountain.

The summit of this pass, accord-
ing to observations made by the State geological survey, is fourteen hun-
dred and seventy-two feet above the sea. Pacheco Peak, on the south side of the pass, is two thousand eight hundred and forty-five feet high, sharp, and capped with trachyte. It forms an excellent landmark for the San Joaquin and San José valleys for a great distance; and I have frequently seen it from the summit of El Capitan and Sentinel Dome, Yosemite. Mt. Hamilton, north of the pass, and easily reached from the town of San José, is two thou-
sand four hundred and forty-eight feet in height. San Carlos Peak, some distance to the south, is nearly five thousand feet high, and is about the highest point on the Monte Di-
ablo range.

After we were fairly over the sum-
mit of the pass, and had reached an open hill-brow, a scene of peerless grandeur burst suddenly upon us. At our feet, basking in sungold, lay the Great Central Plain of California, bounded by the mountains on which we stood, and by the lofty, snow-capped Sierra Nevada; all in grand-
est simplicity, clear and bright as a new outspread map.

In half a day we were down over all the foot-hills, past the San Luis Gonzaga Ranch, and wading out in the grand level ocean of flowers. This plain, watered by the San Joaquin and Sacramento rivers, formed one flower-bed, nearly four hundred miles in length by thirty in width. In order that some definite conception may be formed of the richness of this flower-field, I will give a harvest gathered by me from one square yard of plain, opposite Hill’s Ferry, a few miles from the coast-range foot-hills, and taken at random, like a cupful of water from a lake. An approximation was made to the number of grass flowers by counting the panicles, to the flowers of the Compositae by counting the heads. The mosses were roughly estimated by counting the number growing on one square inch. All the flowers of the other natural orders were counted one by one.
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<table>
<thead>
<tr>
<th>Natural orders</th>
<th>No. of flowers</th>
<th>No. of species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graminaceae</td>
<td>29,830</td>
<td>3</td>
</tr>
<tr>
<td>Composite</td>
<td>132,125</td>
<td>2</td>
</tr>
<tr>
<td>Leguminosae</td>
<td>2,620</td>
<td>2</td>
</tr>
<tr>
<td>Umbellifera</td>
<td>620</td>
<td>1</td>
</tr>
<tr>
<td>Polemoniaceae</td>
<td>401</td>
<td>2</td>
</tr>
<tr>
<td>Scrophulariaceae</td>
<td>169</td>
<td>1</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubiaceae</td>
<td>85</td>
<td>1</td>
</tr>
<tr>
<td>Geraniaceae</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td>Musci</td>
<td>22</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1,000,000</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Funaria and Dicranum</td>
<td></td>
</tr>
</tbody>
</table>

Number of natural orders, 9 to 10. Of species, 16.
Total number of open flowers, 165,912. Mosses, 1,000,000.

In the above estimate, only open living flowers were taken into account. Those which were still in bud, together with those that were past flower, would number nearly as many more. The heads of the Compositae are usually regarded as one flower. Even then we would have seven thousand two hundred and sixty-two flowers, together with a thousand silky, transparent panicles of grasses, and a floor an inch thick of hooded mosses. The grasses have scarce any leaves, and do not interfere with the light of the other flowers, or with their color, in any marked degree.

The yellow of the Compositae is pure, deep, bossy solar gold, as if the sun had filled their rays and flowerets with the undiluted substance of his very self. In depth, the purple stratum was about ten or twelve inches; the yellow, seven or eight, and the moss stratum, of greenish yellow, one. But the purple stratum is dilute and transparent, so that the lower yellow is hardly dimmed; and only when a horizontal view is taken, so as to look edgewise through the upper stratum, does its color predominate. Therefore, when one stands on a wide level area, the gold immediately about him seems all in all; but on gradually looking wider the gold dims, and purple predominates.

In this botanist's better land, I drifted separate many days, the largest days of my life, resting at times from the blessed plants, in showers of bugs and sun-born butterflies; or I watched the smooth-bounding antelopes, or startled hares, skimming light and swift as eagles' shadows; or, turning from all this fervid life, contemplated the Sierras, that mighty wall uprising from the brink of this lake of gold, miles in the higher blue, bestriding aloft its domes and spires in spotless white, unshining and beamless, yet pure as pearl, clear and undimmed as the flowers at my feet. Never were mortal eyes more thronged with beauty. When I walked, more than a hundred flowers touched my feet, at every step closing above them, as if wading in water. Go where I would, east or west, north or south, I still plashed and rippled in flower-gems; and at night I lay between two skies of silver and gold, spanned by a milky-way, and nestling deep in a goldy-way of vegetable suns. But all this beauty of life is fading year by year, fading like the glow of a sunset, founder in the grossness of modern refinement. As larks are gathered in sackfuls, ruffled and blood-stained, to toy morbid appetite in barbarous
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towns, so is flower-gold gathered to slaughter-pens in misbegotten carcases of oxen and sheep. So always perish the plant peoples of temperate regions,— feeble, unarmed, unconfederate, they are easily overthrown, leaving their lands to man and his few enslavable beasts and grasses. But vigorous flower nations of the South, armed and combined, hold plantfully their rightful kingdom; and woe to the lordly biped trespassing in these tropic gardens; catbriers seam his flesh, and saw-palmettoes grate his bones, and bayonets glide to his joints and marrow. But, alas! here only one plant of this plain is armed; a tall purple mint, speared and lanced like a thistle. The weapons of plants are believed by some to be a consequence of “man's first disobedience.” Would that all the flowers of the Sacramento and San Joaquin, were cursed,—thorned and thistled in safety!

February and March is the ripe spring-time of the plain, April the summer, and May the autumn. The first beginnings of spring are controlled by the rains, which generally appear in December. Rains between May and December are very rare. This is the winter,—a winter of drought and heat. But in no part of the year is plant-life wholly awanting. A few lilies with bulbs very deep in the soil, and a rosy compound called tar-weed, and a species of erigonum, are slender inconspicuous links which continue the floral chain from season to season around the year.

Ere we were ready to recommence our march to Yosemite, May was about half done. The flowers and grasses, so late in the pomp and power of full bloom, were dead, and their parched leaves crisped and crackled beneath our feet, as if they had literally been “cast into the oven.” They were not given weeks and months to grow old; but they aged and died ere they could fade, standing side by side, erect and undecayed, bearing seed-cells and urns beautiful as corollas.

After travelling two days among the delightful death of this sunny winter, we came to another summer in the Sierra foothills. Flowers were spread confidently open, and streams and winds were cool. Above Coulterville, forty or fifty miles farther in the mountains, we came to spring. The leaves of the mountain-oaks were small and drooping, and still bore their first tintings of crimson and purple; and the wrinkles of their bud-folds were still distinct, as if newly opened; and, scattered over banks and sunny slopes, thousands of gentle plants were tasting life for the first time. A few miles farther, on the Pilot Peak ridge, we came to the edge of a winter. Few growing leaves were to be seen; the highest and youngest of the lilies and spring violets were far below; winter scales were still wrapt close on the buds of dwarf oaks and hazels. The great sugar-pines waved their long arms, as if about to speak; and we soon were in deep snow. After we had reached the highest part of the ridge, clouds began to gather, storm-winds swept the forest, and snow began to fall thick and blinding. Fortunately, we reached a sort of shingle cabin at Crane Flat, where we sheltered until the next day. Thus, in less than a week from the hot autumn of San Joaquin, we were struggling in a bewildering storm of mountain winter. This was on or about May 20, at an elevation of six thousand one hundred and thirty feet. Here the forest is magnificent, composed in part of
the sugar-pine (*Pinus Lambertiana*), which is the king of all pines, most noble in manners and language. Many specimens are over two hundred feet in height, and eight to ten in diameter, fresh and sound as the sun which made them. The yellow pine (*Pinus ponderosa*) also grows here, and the cedar (*Libocedrus decurrens*); but the bulk of the forest is made up of the two silver firs (*Picea grandis* and *Picea amabilis*), the former always greatly predominating at this altitude. Descending from this winter towards the Merced, the snow gradually disappeared from the ground and sky, tender leaves unfolded less and less doubtfully, violets and lilies shone about us once more, and at length, arriving in the glorious Yosemite, we found it full of summer and spring. Thus, as colors blend in a rainbow, and as mountains curve to a plain, so meet and blend the plants and seasons of this delightsome land.

**Yosemite, Cal.**

**Works and Days in May.**

The spring of the almanac is a delusion. Sleighs are in order in March, and April days wet and unpotetical. Imaginative people think they see the robes of Spring in the upspringing grass, and giddy robins make short runs, and then pause to consider things, as if not quite sure about the weather. Small children array themselves in paper flowers, call it May Day, and furnish examples of the early pious bud transferred to heaven.

Suddenly fur capes become a burden, and the house-mother is called upon for thinner clothes. Camphor and cedar-closets are in order; and the peas planted in April mud astonish the despairing planter with greenness. There is no spring in New England. Winter fires burn till muslins are wanted. It is warm weather abruptly; and the house-mother goes out to consider the garden. The proverbial woman who stands next "the preacher" had many virtues, and "her own works praise her in the gates;" but she never had a garden. She did not need that discipline. Higher virtue is now demanded; and the flower-garden has become for some a means of grace. The ground is rough and bare; not even the remembrance of last summer's glory remains. The place is like a sheet of paper, waiting for words, good or bad. The paper may be re-written or destroyed, if not lovely; but the garden is made up for a season, and lasts all summer, be it a paradise or a potter's field.

The postman springeth up like a flower, and beareth nothing but leaves. Catalogues without number appear. Distracting lists of new flowers burst into printed bloom. Books with a hundred leaves tell of novelties in seeds; and the florists become audacious in advertising the wonders of centaurea, gymnocarpa, altenantheras, and arbutilon Thompsonii. The sweet days of bachelor's button, lady's slipper, and forget-me-not are gone; and these things have taken their places. To the horticulturally untutored mind they are appalling; and we cannot wonder that the house-mother is perplexed. Meanwhile the spring has been omitted; and the summer days have come. There is a lawn before the house; and in the grass are "hearts and rounds," that must be filled with something that will bloom or look pretty. What, and how, are the questions.

What do you propose to do with the flowers? Do? Why, to look pretty,