



**Click here to view
current issues**
on the Chicago Journals website.

Rambles of a Botanist in New Mexico

Author(s): Edward Lee Greene

Source: *The American Naturalist*, Vol. 12, No. 3 (Mar., 1878), pp. 172-176

Published by: The University of Chicago Press for The American Society of Naturalists

Stable URL: <https://www.jstor.org/stable/2447665>

Accessed: 14-03-2021 16:24 UTC

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



JSTOR

The American Society of Naturalists, The University of Chicago Press are collaborating with JSTOR to digitize, preserve and extend access to *The American Naturalist*

RAMBLES OF A BOTANIST IN NEW MEXICO.

BY EDWARD LEE GREENE.

I.

SANTA Rita del Cobre is situated in the extreme south-western part of New Mexico, amid the Santa Rita mountains, so rich in copper ore. It was in former times a Mexican penal colony where convicts did service in the mines; now, however, since the acquisition of that region by the United States, Santa Rita del Cobre has become a mere pile of adobe ruins; the crumbling walls, a group or two of neglected and very ancient looking peach trees, and the abandoned mines showing to him who passes through, that the place was not always the silent wilderness it now appears. New towns are at present springing up within a few miles, in different directions; for the American people have discovered rich silver mines not far from where the Mexicans found only the grosser and less valuable metal. It is an interesting region, the natural history of which has not been looked into except by the few scientists who have accompanied one or two government surveying expeditions in passing through it. Aglow with the ardor of a botanist in a new field of study, I entered this remote corner of New Mexico from the westward early in April. The broad expanse of plains through which runs the boundary line between this territory and Arizona was already decked with a profusion of flowers. The number of species was not great, but each species was represented by myriads of individuals, so that the whole prairie landscape seemed painted in lively colors. The plant most common of all was the smaller species of California poppy (*Eschscholtzia douglasii* Hook. & Arn.), one of the characteristic plants of the Pacific coast, hardly to have been looked for unless as a rarity so far eastward as this. In northern parts of California the *Eschscholtzias* sometimes grow in such abundance on the plains that sensitive eyes are dazzled and pained by the intense brightness of the mass of golden yellow bloom; yet never in California have I seen a landscape more brilliant with these flowers than were these level tracts away upon the borders of New Mexico. An albino variety, more pleasing than the normal yellow was frequently noticed, its petals not pure white but pale cream color, with a yellow spot at the base.

In fine contrast with the sun yellow of the California poppies, was the bright purple of a spreading Verbena, common here (*V. bipinnatifida* Schauer), a species which adorns the plains all along the base of the Rocky mountains from Mexico to the far northward. A blue flowered dwarf lupine (*L. brevicaulis* Wats.) was noticed in very sandy places, and two larger leguminous plants were conspicuous, not by their flowers which in both species were small, dull-purple, but by their large inflated pods. On one of them (*Astragalus diphysus* Gray) these pods were decidedly ornamental, being specked with dark purple, and looking almost like nests of birds' eggs as they lay in clusters on the sand, for the stems that bear them are nearly or quite prostrate. The other is also an *Astragalus* (*A. trifloris* Gray), producing almost white and very thin membranous pods of oblong shape. These when mature fall from the stem without opening to discharge their seeds, and are tossed about over the plains by every wind; sometimes lying in heaps under the lee of bushes and tufts of grass or other herbage. These harmless toys of the winds had, before I was accustomed to their ways, to my nerves, a singular little faculty of suggesting evil, the effect of which might slightly have amused a witness, had there been one. The weed gatherer on these plains needs to be always on the look-out for rattlesnakes; one of these reptiles may be lying coiled up under or near by any plant which he steps aside to examine or collect. The warning rattle is a sound he is familiar with. Now while he bends over some novel and interesting plant, absorbed in contemplating its peculiarities, or busily preparing specimens of it for his port-folio, let a passing breeze set in motion one of these bladder-dery capsules, and as it tumbles near with its detached seeds rattling within, ten to one he will be startled with the idea that a serpent is at his heels. The sound of the rattlesnake is very perfectly reproduced by the moving dry astragalus pod and seeds.

From these plains we pass gradually up to the highest lands of the low range, called the Burro Mountains, and are within an easy day's journey of the ruins of Santa Rita del Cobre, and equally near a number of new and lively mining camps. For a southwestern mountain chain the Burros are well watered and well timbered; that is to say, there are small springs and streamlets to be met with at intervals of a few miles, and their gentle slopes and rounded summits produce a scattered growth of oaks, pines

and cedars, all being peculiarly south-western species of rather dwarf and stunted habit. There is also a considerable variety of shrubs and herbaceous plants, making it altogether very interesting ground for the herbalist. The zest of botanizing in these hills was, however, a little tempered by fear of Indians. At the time of my journeying among them the Apaches were giving more trouble than usual, "on the rampage" as the settlers have it; sometimes riding up boldly to the lonely stage stations and driving off stock before the eyes of the solitary keeper; now and then shooting down upon the high road a helpless mail-rider for the sake of his pony, or an unprotected buck-board driver for his span of mules, and keeping all travelers and the few scattered settlers in a state of perpetual fear.

"Wagons close by?" asked the lone tenant of the one hostelry in the Burro Mountains, Carson by name, and nephew of the renowned "Kit," as port-folio in hand and haversack over my shoulder I came to his door a little before sunset. I answered that I knew of no wagons being on the road. "You come alone?" I replied in the affirmative, and volunteered at once such brief account of myself as would partly satisfy his manifest curiosity. "Well," said he, after a pause, and with an assumed air of calmest philosophy, "I reckon a man don't die 'till his time comes." The fact was the Apaches had made *him* a call only the day before, and driven away captive the horses that chanced to be grazing on the hillside opposite the door, and the man had not quite recovered from his fright. I, the luckier mortal, had leisurely botanized across a hundred miles of the infested region without having seen a savage. Nothing more formidable than Carson's pet turkey had I met with on all the road. This bird, a remarkably fine specimen of his species, assailed me furiously with beak and wings as soon as I came near the house. There are no domestic turkeys in the country, and this wild one had come to the ranch alone, of its own accord, when a mere chick, and that evidently with a mind to renounce forever the society of its kindred. Carson called the bird his dog, and assured me that he never failed by his loud cry of alarm to announce the approach of an Indian or any stranger, either by day or night. Both his antecedents and character seemed to me rather remarkable, and I record them here for the edification of the ornithological. At this stage-station I resolved to establish

myself for a day or two for the purpose of studying somewhat carefully the flora of the vicinity. In the early morning I wandered out among the picturesque rocky hills to find their sunny southward slopes covered with purple Phacelias (*P. crenulata* Torr.), scarlet Indian-pinks (*Castilleja integra* Gray) and many other plants less showy but more interesting to the botanist.

Hemispherical masses of a low-growing cactus with light scarlet flowers (*Cereus phoeniceus* Engelm.) adorned the otherwise barren rocks away towards the summits, and here also in the shade of a lofty overhanging precipice, I detected, to my great delight, the handsome saxifragaceous shrub *Fendlera* (*F. rupicola* Eng. and Gray). It was hardly yet in flower; but a few weeks later in the more immediate vicinity of Santa Rita I saw it in perfection, its gracefully recurved branches resembling wreaths of large rose-colored, or sometimes nearly white flowers, interspersed with narrow green leaves. It is a beautiful bush, and one which from its home in the secluded mountain dells of the far south-west ought to be introduced to our gardens and made the associate of its much admired kindred, the *Deutzia* and the mock orange. I returned from this day's ramble bringing a port-folio well filled with rare plants, and in my hand a bundle of the thick leaf-stems of a stout-growing species of dock (*Rumex hymenosepalus* Torr.). The latter I handed to my good-natured, obliging host, with the request that he would have them made into a pie for my dinner. He looked at the stems suspiciously, at me enquiringly, and said *he* would have the pie made if I wanted to eat it and run all risks. This I agreed to. On the previous day, after having traveled from early morning until long past mid-day without water, I had pulled the root leaves of this fine-looking dock, eaten a considerable quantity of the thick, juicy and pleasantly tart petioles, and found them refreshing. I thought it worth while to try to demonstrate to these dwellers in a wilderness where there are no fruits, that in this common plant of the valleys around them they had a very tolerable substitute for rhubarb at least. Carson remarked that when the pie was taken from the oven it smelled nicely, but I could in no wise prevail on him to taste it. He was afraid the "weed" was "something poison."

As a *Rumex* or dock, this species is remarkable as growing not in wet places after the habit of most species of its genus, but often on dry plains, far from springs and streams, just where its

sour, juicy, refreshing stems might often be very serviceable to travelers if acquainted with its properties.

From the summit of the Burros the eastward slope stretching away for thirty miles, to the base of the Santa Ritas, descends so very gradually that the whole tract appears more like an elevated plain than like a mountain slope. The vegetation is that of the higher south-western plains, there being no trees, few bushes, in fact not much but grasses and numerous species of the vast genus *Astragalus*. The *Astragali* that grow here (*A. mollissimus* Torr.; *A. missouriensis* Nutt.; *A. humistratus* Gray; *A. cobrensis* Gray; *A. shortianus* Nutt., and *A. nuttallianus* Gray) are mostly very handsome sorts, with more or less white, silky foliage, and fine racemes of rich violet, or pink, or purple flowers, quite different from the rattle-podded things of the same genus which occupy the plains at the western base of this same range of hills.

—:O:—

RECENT LITERATURE.

LECONTE'S GEOLOGY.¹—The body of this work is divided into three parts, treating respectively of dynamical, structural and historical geology. The author devotes the large space of 160 pages to the consideration of the dynamical agencies concerned in producing crust-modification. Atmospheric, aqueous, igneous and organic agencies are successively considered. Erosion due to rain and rivers, the action of waves and tides, glacial action, chemical agencies, each receive a full share of attention, with good illustrations. The subject of earthquakes and volcanoes is fully and elaborately discussed and the great geyser district of the West receives more attention than has been devoted to it hitherto in any popular work. The illustrations of the great geysers, from the Reports of Hayden's Survey, give the book a freshness that will be appreciated by all American students. The section devoted to the consideration of reef-formation is full of valuable matter with well chosen illustrative diagrams, as is also that on faunal and floral distributions.

The hundred pages devoted to structural geology is an unusually large proportion for this subject, but the many varieties of faulting and unconformability due to various causes, and which are calculated to puzzle the young geologist, require the full elucidation which they receive in the work.

¹ *Elements of Geology*. A Text-book for Colleges and the General Reader. By JOSEPH LECONTE, Professor of Geology in the University of California. 903 illustrations. Svo, pp. xiii, 588. D. Appleton & Co., New York, 1878. Price \$4.50.