

The Lava Beds of Idaho

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THE State of Idaho presents a great variety of scenery. High mountains, some of them 11,000 and 12,000 feet, spread over a great part of the country. Often, at the foot of these mountains, one beholds splendid irrigated valleys of considerable extent. Toward the southern part of the State, the mountains are lower, and gradually merge into a rather monotonous plateau, on which there is practically no rainfall in summer, and the grey sage brush (*Artemisia tridentata*) covers the land as far as the eye can see.

On this southern plateau there are a number of localities where in ancient times there was considerable volcanic activity, some of it taking place less than a thousand years ago,—naturally a rather recent date in geologic history. In such sections as the so-called "Craters of the Moon,"—now a National Monument,—the effects of volcanic eruptions can be observed in the craters, spatter and cinder cones, bombs and lava flows.

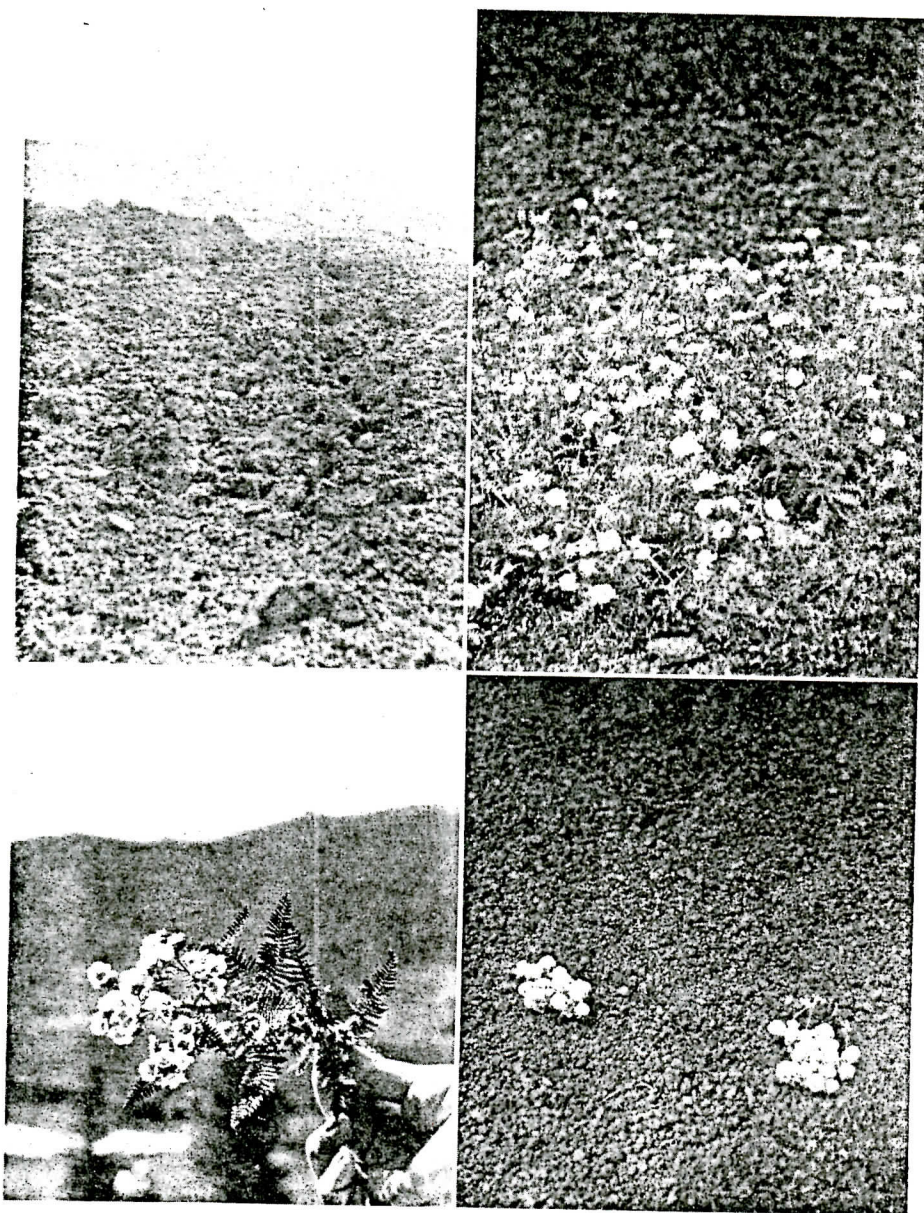
Last year the writer had the opportunity of visiting a number of localities subjected to these ancient upheavals, and to study the vegetation growing on them. Upon approaching one of these areas, it looks like an enormous coal field, interspersed with small daubs of green. If the visit is at high noon in midsummer, the intense heat under a brilliant blue sky almost makes the spectator gasp for breath. The thought flashes through his head,—“how can anything grow in this heat blasted country?” And yet trees, shrubs and herbaceous plants manage to exist,—not in large tracts, but scattered here and there over the landscape.

In these lava fields are numerous

deep depressions and caves, where, to the amazement of the visitor, ice often covers the walls. Imagine going from the surface, where the temperature is probably over 100 degrees in the shade, down into a cave where nothing grows, and the thermometer never registers above 40 degrees. During the cold winters, ice usually forms, and remains possibly throughout the entire summer.

In one section, black cinders may lie on all sides, and to the surprise of the visitor, rising from it, may be found a few straggling limber pines (*Pinus flexilis*). On the ground, spaced a few feet apart, seldom in large clumps, in striking contrast to the black cinders, hundreds, even thousands of tiny plants, with possibly the whitest leaves to be found in all Nature, dot the landscape. This plant is a low Mountain Buckwheat,—the smallest I have ever found,—and is called *Eriogonum depressum*. Rising about five inches above the leaves are erect little stems bearing creamy yellow flowers, often tinged with red. Some of the seeds of this eriogonum we brought home, and tried to raise in a coldframe. They germinated, but the ensuing leaves lacked the intense white color of their parents. Like the Edelweiss, when brought down from its native mountains, and raised in the lowlands, the plant presented a rather dingy appearance.

Although we arrived too late in summer to see *Lewisia rediviva* in bloom, we were told that in June it could be found in considerable profusion, and that the flowers generally had white petals, whereas those that I had found in other sections were generally rose color. Conversely *Chaenactis Douglasii*, with its grey, finely divided leaves, had



Upper left, The country; upper right, *Chamaebatiaria millefolium*; lower left, detail of last; lower right, *Eriogonum depressum* on lava bed

rather rich pink flowers, whereas elsewhere I had only found white varieties. No doubt here too the lava soil had

affected the color of the flowers.

Although an endless number of penstemons grow in these mountain

States, I could only find one species on the lava rocks,—namely the white flowered *P. densatus*,—a plant about fifteen inches high, each flower rather small, but the mass effect rather attractive. This species I have had in my garden for a couple of years, but whereas it is a firm erect plant in its native habitat, here it is inclined to be somewhat straggly, very likely due to the heavier summer rainfall.

I find that most people have the impression that the monkey-flowers grow only in fairly damp soil, which is certainly true of those two yellow monkey-flowers that we see occasionally in eastern rock gardens,—namely *Mimulus Langsdorfi* and *primuloides*; but here on the lava beds, growing in dry rocky places, we find a charming low annual mimulus, which I have never seen in any rock garden, namely *M. nanus*, with its rich raspberry colored flowers and a brownish throat. We brought back seeds of this plant, and if it thrives, it should be a charming acquisition to the rock garden.

Anyone who has visited arid regions in our western States has no doubt encountered some species of mentzelia, which seems able to withstand the longest of summer droughts. On these lava beds grows a species, *M. multiflora*, about two and a half feet high, with very large light yellow flowers and numerous long stamens that give the rather bushy looking plant an attractive appearance. Like all these western mentzelias, the greyish-green leaves feel rough and hispid to the touch.

We generally have the impression that delphiniums require a fair degree of moisture, and yet on these arid wastes we came across a few specimens that had managed to survive. At the time of our visit the flowers had already begun to fade, so we were not

certain of the species, but it seemed to bear a close resemblance to *D. Nelsoni*, which is also found in the neighboring States of Utah and Wyoming.

Of the ferns, the only one encountered was a charming woodsia, *W. oregona*, which I had also seen in New Mexico. Here it was growing in the shady crevices, with so little soil covering the roots that one wondered how it could possibly sustain life.

The most common shrub in this region is probably *Purshia tridentata*, a rather low bush with yellow flowers and small trident like leaves. *Philadelphus Lewisii*, which is the State flower of Idaho, though rather plentiful elsewhere in Idaho as well as in the neighboring States, only managed to exist here and there in lava crevices. Though having masses of attractive medium sized flowers, it really cannot compare with some of the magnificent hybrids that we now have in our gardens.

The outstanding flowering bush in midsummer is one that we found nowhere else in Idaho, and apparently has no common name, but bears the rather formidable one of *Chamaebatiaria Millefolium*. Its interesting leaves are as finely cut as those of any fern, and toward the top of the stems it bears large panicles of pure white flowers. The stems are very sticky, and no doubt enable the plant to withstand evaporation of water. If this species could adapt itself to eastern gardens, it would be a distinct acquisition. Next year I shall attempt to raise it from seed but my hopes of success are not very high.

As we left this country, we looked back over the black expanse of rock and cinders, and wondered at the hardiness of these plants that could resist the intense cold of winter as well as the terrific heat and the well nigh rainless days of summer.