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NATIONAL PARK SERVICE  
YOSEMITE NATIONAL PARK

## YOSEMITE NATURE NOTES

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Yosemite Nature Guide Service

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This is one of a series of bulletins issued from time to time for the information of those interested in the natural history and scientific features of the park and the educational opportunities the park affords for the study of these subjects.

Utilization of these bulletins by those receiving them to the end that the information contained therein might be as extensively distributed as possible will be appreciated.

W. B. Lewis, Superintendent

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### NATURE STUDY PARTY CLIMBS MT. DANA

Leaving Happy Isles at six thirty on the morning of August fourth, a party of twelve hikers led by a nature-guide walked twenty-five miles and climbed six thousand feet on their way to Boothe Lake Hikers' Camp, where they spent the first night.

The following morning they explored the chain of beautiful lakes that lie along a bench some two hundred feet above the hikers' camp. In the afternoon they followed down the Ireland Creek Trail to the Tuolumne Meadows where the second night was spent. By this time some of the hikers thought that they had earned a rest; however, a party of eight on the following morning got an early start from the Tuolumne Hikers' Camp and climbed Mt. Dana, the second highest peak in the park. The first five miles were along the dusty stage road. The party turned off at the Mono Pass Trail. A quarter of a mile through the Tamara Forest brought them to a little stream, following which they soon found themselves on the saddle between Mount Dana and Mount Gibbs.

From the top of the saddle a thousand-foot climb brought the party to the summit of Dana. Here a delightful hour was spent enjoying one of the most glorious outlooks to be had in the national park.

It was all down hill going home, and the party arrived in the Meadows pleased with the knowledge that they had been the first nature guided party to reach the elevation of 13,050 feet.

#### WHAT IS "BULL PINE?"

The nature guides are often asked the question, "What is Bull Pine?" "Bull Pine" is a term applied in various localities by woodmen and lumbermen to rather widely different trees. Immature Western Yellow Pines (*Pinus ponderosa*) in which the bark has not yet assumed the alligator-skin-like character of that of the mature trees is usually called by this name. In other localities the Digger Pine (*Pinus sabiniana*) is designated by the name of "Bull Pine", while in still other localities the term is applied to the Bishop Pine (*Pinus muricata*). In other cases the term is apparently applied to any pine lumber of inferior quality.

#### WESTERN KINGBIRD VISITS YOSEMITE

To the bird student August has one compensation. This month needs some bright spots, for this is the month when birds moult. Consequently, bird horizons drop from the thirty mark to around fifteen, for birds cease to sing and hide away in the foliage to such an extent that their presence is difficult to establish. The compensation in the month of August is to be found in the post nesting season migrants, stragglers from the lower elevations that have completed their nesting and have spread out searching a better food supply. The first bird of this character to be noted by the writer this year was a Western Kingbird seen August 6 in Lower Sentinel Meadow. Its dark wings and tail and yellowish breast are attractive, and this flycatcher is graceful on the wing. One ceases to admire, however, when the noisy chattering call is given. To many this bird is known as the Bee Martin, for it sometimes feeds about beehives. As an insect catcher it has few equals, and its pugnacity displayed against birds even as large as a hawk is well known.

#### A FLYCATCHER WEEK

The first week in August was "Flycatcher week" in the Yosemite Valley. Never were more kinds of flycatchers noted in a single week before. The dry season was perhaps responsible for this condition, as three species that habitually spend their time at lower elevations were present in the Valley. And peculiarly one species that really belongs above the rim of the Valley was also present. Besides these four species, there were the two common nesting species of the Valley and one species that is believed to nest here very sparingly.

The following paragraphs give the status of the seven species noted:

Western Kingbird (*Tyrannus verticalis*) Nests at lower elevations, a rare visitor to the Valley in early spring before the nesting season. Not previously noted during the month of August.

Ash-throated flycatcher (*Myiarchus cinerascens cinerascens*) A bird of lower elevations. The single bird that was twice noted during the month established a new record for the Valley.

Black Phoebe (Sayornis nigricans) Nests at lower elevations but is usually to be found in the Valley before and after the nesting season.

Olive-sided Flycatcher (Nuttallornis borealis) A common nesting bird above the rim of the Valley. For the past two years a single pair have nested on the floor of the Valley.

Western Wood Pewee (Myiochanes richardsoni richardsoni) The most common flycatcher in the Valley during the nesting season.

Traill Flycatcher (Empidonax trailli trailli) A common nesting bird on the floor of the Valley but not so numerous as the Wood Pewee.

Western Flycatcher (Empidonax difficilis difficilis) A rare bird in the Yosemite, but it is believed that one or two pair nest each year in the densely wooded section above Mirror Lake.

#### THE FLORA OF YOSEMITE AND CAPE COD

It would seem that if one start with a fair knowledge of the plants in his backyard he would find either the same species or their counterparts the world over. Such at least is the experience of a nature guide venturing from the sand dunes of Cape Cod on Massachusetts Bay to the Sierras of the Yosemite National Park. The marked similarities have awakened so many pleasant surprises - so many trains of reminiscences along the trailside - the writer has been tempted to put his random notes down as a permanent reminder.

Our story must date back to the end of the glacial period, some 20,000 years ago, when both Yosemite and Cape Cod started with a clean slate. The soil in both places is of granite origin - in Yosemite from the granite mountains of the Sierras and on Cape Cod from the granite coast of Cape Ann. The glacial streams sorted out and deposited some of the materials in lowlands but left large masses of unsorted gravel in hills, those pushed up at the end of the glacier being known as terminal moraines and those parallel to its course as lateral moraines. If the terminal moraine dammed a river course, lakes were formed in back of it. There were often ice masses left in the moraine material; as they melted they left kettle holes which now hold lakes. The shallower ice basins became sphagnum bogs without inlets to cover the plant growth with sand. The vegetation in both Yosemite and Cape Cod is mostly on this moraine material, the cliffs and domes of Yosemite and the cliffs and dunes of Cape Cod being scarcely planted as yet.

The distribution of plants on the moraine deposits is determined by the moisture. Both regions have fine glacial meadow gardens. The dry sand areas of ancient lake bottoms and the recent talus slopes are populated by drought resistant plants. The polished domes and wind swept dunes scarcely hold moisture enough for pioneer plants. The comparison of plants in these similar areas merely scratches the surface of possibilities. These introductory notes may serve to remind others of how they have renewed plant acquaintances as they traveled from east to west or west to east. If the chain of evidences can some day be gathered into one story, it may make a fascinating chapter in plant annals.

**ARCTOSTAPHYLOS:** *Arctostaphylos Uva-ursi* on the Bearberry of Cape Cod covers whole hillsides and indeed serves as the lawn for many summer homes. It was almost a thrill to meet what at first appeared to be the same species at a 7000 foot elevation on the rim of the Yosemite. We now know that the Sierra form is *Arctostaphylos Nevadaensis* or the Dwarf Manzanita. Both plants form loose mats in dry sunny open ground. They are evergreens with zigzag branches and peeling red bark. Their arbutus-like blossoms come early in the season and mature into red acid berries, which are scarcely edible because of their many large seeds. After sending for a Cape Cod specimen, we were still impressed by the similarities rather than the differences. The leaves of both are thick, entire, and glabrous. The main difference in leaves is the presence of a minute tooth on the apex of the Manzanita leaf. It is also broader in proportion to its length, being on the average about one-eighth inch longer than its Atlantic cousin. The Manzanita berry is about one-eighth inch smaller in diameter, the persistent sepals being acute rather than ovate as in the Bearberry. The differences in these two members of the Heath Family are quite minute when we think of one growing within ten feet of sea level and then suddenly appearing from 7000 feet to timberline some 3000 miles away. I have seen Bearberry in the White Mountains growing under similar conditions. As the Appalachians are older, I am wondering if *Arctostaphylos* appeared there first? If it did, how did it get to the high Sierras? Did it come by a granite route or by a moraine road? Where is it found in between, and what are its variations? If we knew all about Bearberry, we might be able to answer other enigmas of the plant world.

**PROSEPA ROTUNDIFOLIA.** Here is another plant that grows near sea level on Cape Cod and is found in Tenaya Canyon at an elevation of about 6,000 feet. Here it grows on the north wall of the gorge in the seams of a moist granite cliff some thirty feet above the river bed. A comparison of the two plants shows a persistent difference in leaves. The alpine plant has a round blade averaging about one-fourth inch in diameter, whereas the leaf of the coast plain plant is broadly elliptic, being transversely  $11/16$  inches wide and  $7/16$  inches in length. An examination of the flowers of the two plants may show them to be separate species. There is no consistent difference in the height of the flower stalk or in the number of flowers. A study of this plant according to its geographic range across the Great Lake region and Montana to California might give interesting data in variation. When the glaciers swept it south, how did it march back?

**HEATH-LIKE PLANTS.** We have been speaking of plants that are most closely related. It is also possible to have totally unrelated plants meet the same conditions in a like manner. On Cape Cod there are two heath-like plants covered with awl-shaped leaves - *Hudsonia ericoides* and *Hudsonia tomentosa*. They are locally known as Poverty Grass as they can grow on dry sandy hills. These low shrubs are members of the Rockcross Family (*Cistaceae*). On the granite rocks of the Sierra sunnits, above 6,000 feet, is found the beautiful Alpine Phlox (*Phlox douglasii*), a member of the Gilia Family (*Polemoniaceae*). These homologous plants of the East and West form dense mats in dry open situations and bear flowers on the upper parts early in the season before the soil is completely dried out. The reduced awl-shaped leaves prevent excessive loss of moisture, and the matting of the leaves may tend to hold the dampness in the soil.

(To be continued)



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