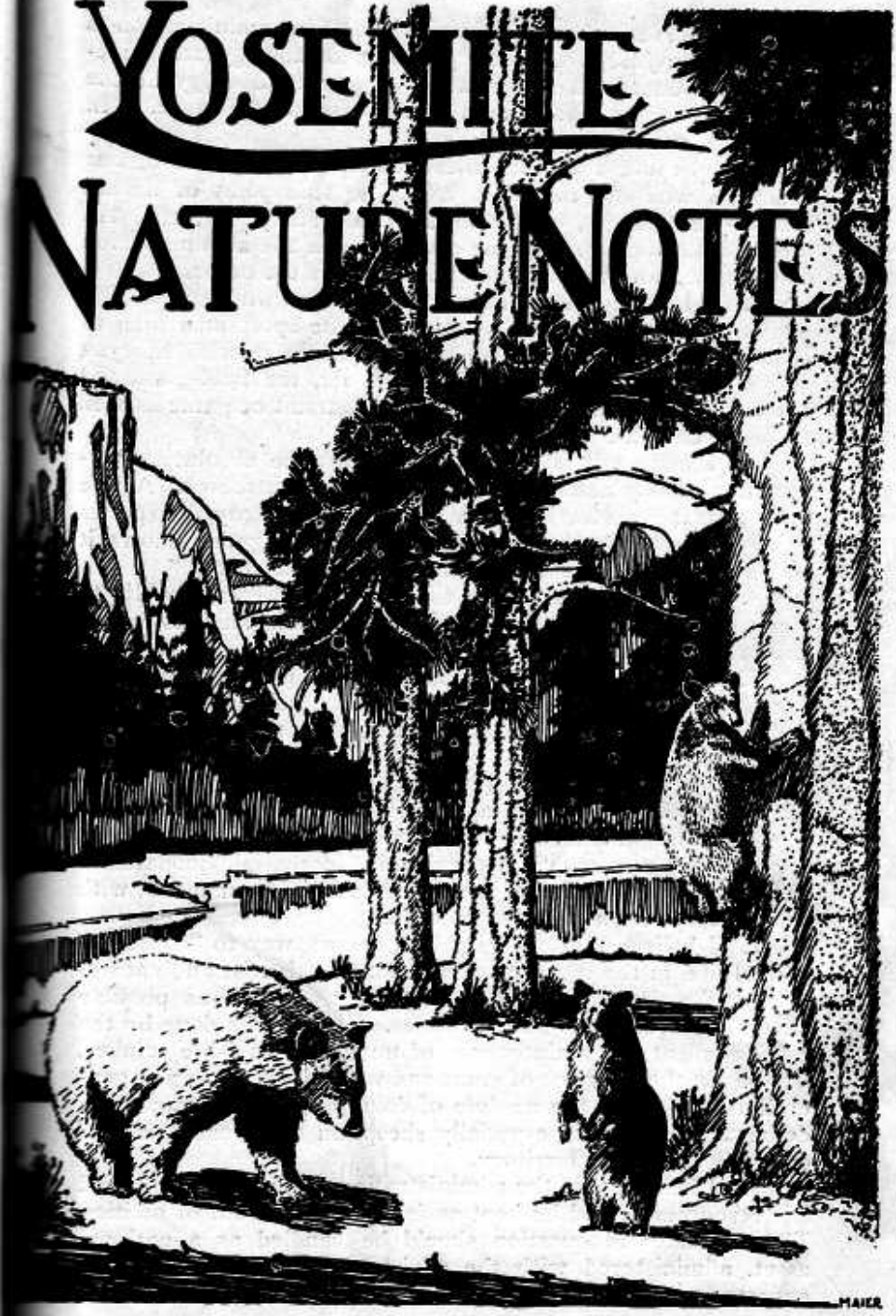
YOSEMITE NATURE NOTES



Volume V November 30, 1926 Number 11

A WILD-LIFE CREED.

A conservationist's creed as to wild life administration is given by Dr. Joseph Grinnell, professor of zoology and director of the California Museum of Vertebrate Zoology at the University of California, in a recent issue of "Science." In brief, the creed follows:

1. I believe that the fullest use should be made of our country's wild life resources from the standpoint of human benefit—for beauty, education, scientific study, fur, etc. All these possible uses should be considered in the administration of wild life, not any of them exclusively of the others.

2. I believe that that portion of our wild animal life known as "game" belongs no more to the sportsman than to other classes of people who do not pursue it with shotgun and rifle. More and more the notebook, the field-glass and the camera are being employed in the pursuit of game as well as other animals.

3. I believe it is unwise to attempt the absolute extermination of any native vertebrate species whatsoever. At the same time it is perfectly proper to reduce or destroy any species in a given neighborhood where sound investigation shows it to be positively hurtful to the majority of interests.

4. I believe it is wrong to permit the general public to shoot crows or any other presumably injurious animals during the breeding season of our desirable species.

5. I believe in the collecting of specimens of birds and vertebrates generally for educational and scientific purposes. A bird killed, but preserved as a study-specimen, is of service far longer than the bird that is shot just for sport or for food.

6. I believe that it is wrong and even dangerous to introduce (that is, turn loose in the wild) alien species of either game or non-game birds and mammals. There is sound reason for believing that such introduction, if "successful," jeopardizes the continued existence of the native species in our fauna, with which competition is bound to occur.

7. I believe that the very best known way to "conserve" animal life, in the interests of sportsman, scientist and nature-lover alike, is to preserve conditions as nearly as possible favorable to our own native species. This can be done by the establishment and maintenance of numerous wild-life refuges.

8. In the interests of game and wild life conservation generally, I believe in the wisdom of doing away with grazing by domestic stock, more especially sheep, on the greater part of our national forest territory.

9. I believe that the administration of our game and wild life resources should be kept as far as possible out of politics. The resources in question should be handled as a national asset, administered with the advice of scientifically trained experts.

YOSEMITE NATURE NOTES

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THE FIR TREES OF YOSEMITE NATIONAL PARK

By D. D. McLean

Three kinds of so-called fir trees are present in Yosemite National Park. Two, the red and white, are true firs, while the third, the Douglas, is not.

The red fir (Abies Magnifica) is found most commonly between the 6000 and 9000-foot contours in this region. It is the tree that makes up the bulk of the forest in the moister parts of the Canadian life zone. There it forms deep dark forests where little sunlight ever reaches the ground through its dense foliage. Northern and eastern slopes are its favorite spots, where there is plenty of moisture. Thousands of acres of just such forests are found in suitable locations throughout the park. The bluish-silver-tipped branches catch the eye readily as one enters its domain. It can be distinguished from the white and Douglas firs in the following ways: The needles on leaving the branch turn immediately upward, giving the appearance of standing on end. The cones also stand on end as do those of white fir. The adult trees average from 125 to 175 feet in height, with individuals towering up to over 200 feet. The diameter is from three to five feet on the average, with some as great as seven to nine feet.

The lumber obtained from this tree is of no great value as the tree is very "wet;" hence when dry, the boards warp badly.

The White Fir

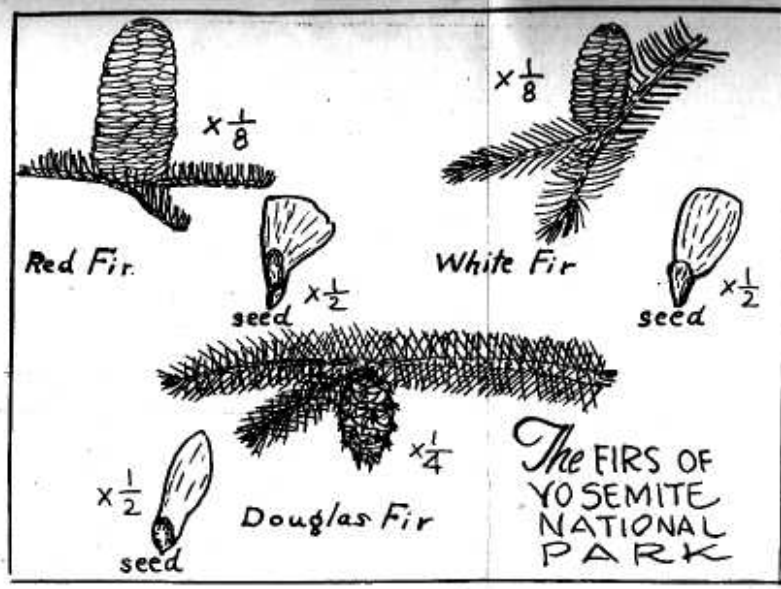
The White Fir (Abies Concolor) is found between 4000 and 7000 feet in the Yosemite region with exceptions of course, to the rule. It is never found in such dense forests as the Red Fir in this region. It also can withstand a dryer and less productive soil. It is a bright green tree and of a most graceful form due to the regularity of the whorls of limbs on the tree and the symmetrical palm-like flatness of its foliage, the needles lying opposite each other on the branchlets. Young trees are especially graceful in their form, being excelled only by the Alpine Hemlock in beauty.

In size the tree attains an average height of 140 to 150 feet with some exceeding 200. The diameter is from 3½ to 5 feet, with some between 6 and 8.

The lumber is similar to the Red Fir being heavily moisture laden which causes the lumber to warp upon drying.

The Douglas Fir

The Douglas Fir (Pseudotsuga Taxifolia) is found most commonly between 3500 and 6000 feet in this region, and next to the Sequoia is one of our most massive trees. It is about on a par with the Sugar



Pine in size. It prefers damp, rich soil and reaches its maximum in the state of Oregon. It is the Oregon Pine of commerce, but really is not a pine at all. The name Pseudotsuga means "False Hemlock."

The cones are hanging in this species and are only 1½ to 3½ inches in length. Above each scale on the cone is a bract with three sharp points, the middle spine being the longest of the three.

The needles protrude at all angles from the branchlets so a line drawn around the points of the needles would form a near circle.

In size it is a monster averaging 180 to 200 feet in height with many 225 feet high. In diameter it varies from 3½ to 6 feet as an average to 10 or 12 feet in individuals.

The lumber is good, brings a fair price and often shows beautiful grain. It is shipped all over the world from Oregon and Washington.

The fir forests are one of the real beauties of Yosemite National Park, and we can be happy in knowing that for all time they will be under the protection of our National Park Service. Certainly a tree of so little money value as the Red Fir is much more valuable in its beauty whether in the deep forest or the silver tipped individual standing alone in a glade

THE CONES OF THE RED FIR

By Myrtle E. Olsen

Not only is the red fir itself magnificent, as its name Abies Magnifica denotes, but its cones are beautiful, colorful objects worthy of our consideration and study. These cones, the fruit of the tree, are light green and velvety, covered with a silvery pubescence and tinged with brown. The form of each scale edge is an oblique parallelogram.

Plucking the cone scales gives one a harmony of colors little expected by the uninitiated. Attached to the dorsal surface of each fan-shaped scale are two seeds about one-half inch in length; the wings are of a beautiful pomegranate red shading into black at the unattached end and showing a delicate banding of white at the lateral borders.

Since the scales are spirally arranged, the scars on the shaft are similarly arranged. In each of these areas are three small holes into which resin pours, these small drops of golden, honey-like fluid glisten on the stalk like tiny jewels. Radiating from the shaft are small, shiny green leaf-like bracts, each of which is attached by means of a white stalk about one-fourth of an inch long. Between these in the region of the shaft one sees the pomegranite red of the wings. Between the green leaf-like bracts are the soft white velvety surfaces of the cone scales. The white is not, however, the monotonous uniformity of velvet, but, the round borders are tinged with green, and the lateral edges are shaded with red and purple, the latter colors being due to the wings of the seeds which are attached dorsally.

Neither verbal descriptions nor the brush of an artist can portray the beauty of these cones; a personal observation of these creations of nature is necessary in order to appreciate fully the colors and charm of architecture.

THE PINE TREES OF YOSEMITE NATIONAL PARK

By D. D. McLean

The great genus Pinus comprises many different species of varying character and geographical distribution.

The genus belongs to the family Coniferae, which includes also the spruces (Picae), larches or true tamaracks (Larix), hemlocks (Tsuga), false hemlocks (Pseudotsuga), firs or "balsam trees" (Abies), "bald" cypress (Taxodium), arborvitae or "cedars" (Thuia), true cypresses (Cupressus and Chamaecyparis), redwood and big tree (Sequoia), and junipers or "cedars" (Juniperus).

This family of coniferae belongs to the great group of Gymnospermae, as does the family Taxacae, the yew-like trees.

The genus Pinus is made up of trees with needle-like leaves in clusters sheathed at the base by paper-like scales and have cones which mature each autumn. These cones are made up of a central stem, to which are attached woody scales, bearing under each a pair of winged seeds with a more or less hard shell.

The wood of the tree is resinous and quite pungent. The resinous sap, when exuded, hardens in time. In one form, the Sugar Pine (Pinus lambertiana), it hardens to a granular sugar of sickening sweetness with laxative properties.

The bark in most forms is rough and deeply furrowed between large flattened plates, especially in the Yellow Pine group.

The Sugar Pine, Largest Pine in the World

The Sugar Pine (Pinus lambertiana), a member of the White Pine group, is our largest and most majestic pine, probably the largest of all the forest pines in the world. It attains a height of from 160 to 180 feet and a diameter of from four to eight feet. Many individuals run far over this average, however.

The bole is long and straight with but very little taper until the first great limbs are reached, usually thirty to forty feet above the base of the tree. These limbs are exceptionally large and are placed at right angles to the trunk, dropping a little at the outer extremities. The adult trees have a flattened crown in many cases.

From the outermost tips of the branches hang long stemmed cylindrical cones from twelve to eighteen inches in length.

The reddish brown bark is from two to four inches and roughly ridged with small plates. The needles, which appear in groups of five, are from two to four inches long and are green in color and pleasing to the eye.

The tree is generally between 4000 and 7000 elevation.

Finest of lumber is secured from this magnificent tree, the long trunk giving many feet of so-called clear lumber (free from knots). The lumber is a creamy white and not very pitchy. Well-seasoned boards have a sweet delightful odor.

The Mountain White Pine

The silver or mountain white pine (Pinus Monticola) is another graceful tree and a first cousin to the sugar pine. It is from fifty to 120 feet in height, and has a diameter of from two to four feet.

The bole of this tree does not compare with the sugar pine, but the reddish or whitish color of its rough or very smooth small plated bark adds much to its beauty.

The cones hang from the tips of the branches in clusters on long stalks. They are slender and pointed and from six to eight inches in length. The foliage is blue-green, and the limbs are at right angles to the trunk.

The tree is generally found from 7000 feet to near timber-line with stragglers dropping to 6000 feet occasionally.

The lumber is a yellowish white and nearly everlasting, presumably due to the slowness of growth which causes compactness in structure.

The White Bark Pine

The white-bark pine (Pinus albicaulis) is the tenacious little pine that hangs on near timber-line. It is also one of the white pine group.

A small tree generally dwarfed and broader than tall, it has managed to find a foothold in this narrow sub-Alpine belt. The bark is thin and whitish in color and only slightly grooved. The needles are in thick tufts at the tips of the branches, the remainder being naked. They are in groups of five from one to two and a half inches in length.

The cones are ovoid in shape and a beautiful dark shade of purple; they become a brownish yellow at maturity and are from one and a half to three inches long.

As the tree is seldom erect and is found at such high altitudes, it is almost never used for anything except the occasional camper's fire wood. It is generally a mass of jumbled and twisted limbs.

The Western Yellow Pine

The Western yellow pine (Pinus ponderosa) is another forest mon-

THE PINE TREES OF YOSEMITE NATIONAL PARK

ster and makes up the largest part of the great Transition Life zone forest.

It is from sixty to 220 feet high with a massive trunk and a long crown generally running up to a sharp point even in adult trees.

The diameter varies from three to nine feet, and the trunk is covered with bark varying from three to four inches in thickness. It is of yellowish color and in great plates with furrows between in adults. The young trees are a grayish red with small scaly plates and very rough.

The needles are in threes (yellow pine group) and from five to ten inches long. Their color is a rich shade of dark green.

The cones are from three to five and a half inches in length, and are located on the tips of the branches, sometimes singly, but more often in clusters. Each scale of the cone bears a sharp hook-like point at its thickened terminus.

As this tree is the most abundant forest tree at the middle altitudes and the lumber is of fine grade, it is cut in great quantities for commercial purposes. The lumber is a brilliant yellowish and highly resinous (pitchy) and has very good lasting qualities.

The Jeffery Pine

The Jeffery pine (Pinus ponderosa jeffreyi) is a variety of yellow pine found at higher altitudes. It is found from 6000 to 9000 feet in the Yosemite region.

The tree is generally more stocky and of hardier appearance than the yellow pine. It averages from twenty to 150 feet in height, varying with the altitude.

The diameter of the trunk is from two to six or seven feet. The bark is rough even in old trees with small plates and deep jagged grooves. The foliage is very dense and of a bluish green color. Needles are in threes and from six to eleven inches long.

The cones are the main point of difference between it and the yellow pine, averaging nearly three times as great in weight and being from five to ten inches in length.

When used for lumber it is sold as yellow pine, and is indistinguishable from that species.

The Lodgepole Pines

The Lodgepole or Murray pine (Pinus murrayana) is the light barked tree found in the moist parts of the Canadian and Hudsonian life zones of the Sierra in this section. It is a hardy tree of slow growth and scant foliage.

It is a tree of from fifty to 100 feet in height at lower altitudes, but often prostrate or dwarfed near timber line. It varies from a mere bush to three feet in diameter with its location.

The bark is thin and very scaly, not furrowed, and of a light gray. The needles are in twos and from one to three and a quarter inches in length. The cones are nearly spherical. Some are slightly wider than long, others are a little longer than wide. The scales are tipped with a small hooked spine.

The tree is slender and gracefully symmetrical with a pointed crown and many branches, some of which nearly reach the ground. The tree has an open appearance and it is but lightly foliaged. It is often miscalled "Tamarack," that tree being one of the deciduous larches not found here.

The lumber is tough and fine grained but one seldom sees it. It is creamy white in color.

The Pinon Pine

The one-leaf pine or pinon (Pinus monophylla) is found only in the Piute gorge above the Tuolumne river, and in a branch of Rancheria creek a short way northwest of that point.

It is a small squatty tree with a hammered down appearance. The bark is thick and very rough and of a dirty gray or brown color.

The needles, which are from one to two and half inches long, are one in a sheath, and often twisted, and a pale yellowish or gray green in color.

The cones when open are a twisted mass of scales each bearing a prickle that is apparently shed before the ripening and opening of the cone.

This tree, which is found commonly in the eastern and southern Sierra, is of course not used for lumber but the nuts are the commonest pine nut of the stores.

The Digger Pine

The digger or gray pine (Pinus sabiniana) is found only near El Portal, and near Wawona, and Poopenaut valley below Hetch Hetchy, where a few scattering individuals have crept across the park boundary.

The tree reaches a height of seventy-five feet in some individuals and is a broad, heavily branched round crowned tree, with often several trunks coming from the ground.

It is gray barked and very rough in appearance. The needles are three in a sheath and from five to twelve inches in length. They are of a pale gray green in color looking almost as though they had been sprinkled with white powder.

The cones are very heavy, and each scale has a large, heavy hook at its terminus. They are from six to eleven inches in length and from four and a half to eight inches through when open.

The tree is not used commercially as lumber, but the cones are often burned, and the large nuts sold in stores.

THE OAKS OF YOSEMITE NATIONAL PARK

By D. D. McLean

The genus Quercus or oaks, is a member of the family Fagaceae, the oaks and chestnuts. The chestnuts (Castanea) are represented in the Yosemite region by the Chinquapin.

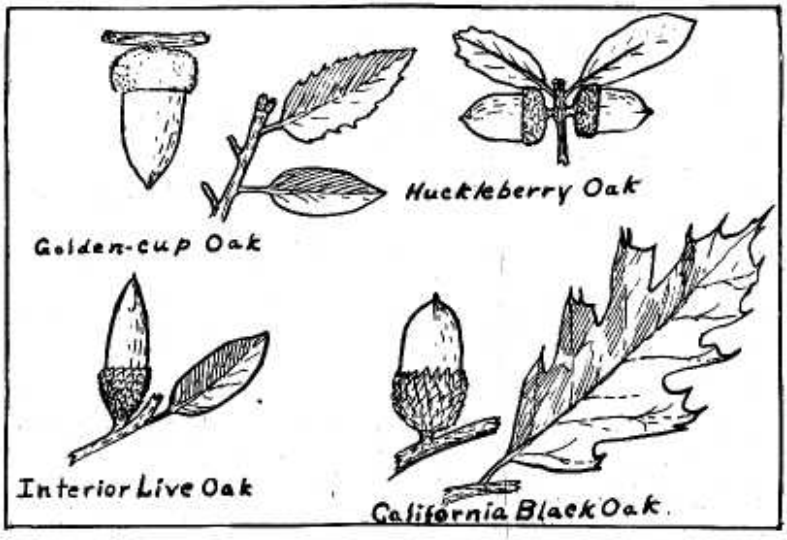
Here we will deal only with the genus Quercus. Four species of that genus are found commonly in the park.

The golden-cup oak (Quercus chrysolepsis) is the beautiful tree we find on our talus slopes in the valley and is found from the foothills up through the yellow pine belt (Transition Life Zone). It is from twenty to sixty feet high, with a round or spreading crown. As it is evergreen, it is one of the live oaks.

The leaves are ovate or oblong ovate. Some are smooth; others are toothed. They are from one to three inches long, green above and golden or grayish below, with a fine fuzz. The acorns are ovate, globose or cylindrical in form, sometimes being blunt, sometimes acutely pointed. They are from one to one and a half inches long and set in cups covered with a soft golden fuzz.

The Huckleberry Oak

The huckleberry oak (Quercus vaccinifolia) is a shrubby low-growing form that grows in great meadowy patches near the rim of the valley. It is also a live oak.



THE COMMONER OAKS OF YOSEMITE NATIONAL PARK

The bark is light colored as in the golden-cup.

The leaves are oval or oblong and blunt pointed, or ovate and sharp pointed. They are seldom toothed and are from one-half to one and a half inches long, and one-quarter to one-half inches wide. There is no golden wash below, but they are generally gray on the under surface.

The acorns are globose ovate and from one-quarter to one-half inch long and set in light thin cups about a quarter of an inch deep. There is no golden fuzz on the cups.

The Interior Live Oak

The interior live oak (Quercus wislizenii) is found in the Merced river canyon up to 3100 feet near Cascades. It is a small rounded

tree with drak gray or black bark, which is smooth in young trees and becomes rough and furrowed in large specimens.

The leaves are ovate and all toothed. They range from one to two and a half inches long and are a bright glossy green above and yellowish green below. The acorns are cylindrical or conical in form and are from one to one and three-quarters inches long, resting in scaley reddish brown cups.

The California Black Oak

The California black oak (Quercus kelloggii) is our most impressive and largest oak. It is found on the valley floor commonly and practically throughout the yellow pine belt.

It is a massive tree from thirty to eighty feet high and two to six feet in diameter. It is gracefully rounded in form. The leaves are dropped during the fall and early winter; hence it is not a live oak. The leaves are broad and thin, being deeply notched with the lobes pointed in from one to several slender teeth. The leaves vary from three to eight or nine inches in length and from two to six inches in width. Their color is bright green above and a powdery grayish green beneath. The acorns are oblong and generally blunt pointed, from one to one and a half inches long. They are set in a deep heavy scaly cup from one-half to more than an inch deep.

RED FIR

SUGAR PINE

SNAKE LAYS EGGS IN CAPTIVITY

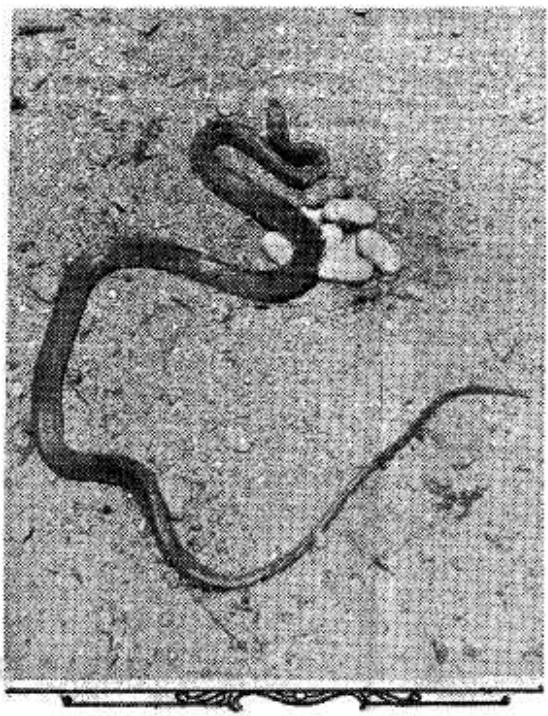
By W. S. Bell

On the morning of July 13, 1926, when I returned to the museum from a field trip, I discovered that the Western yellow-bellied racer, more commonly called the "blue racer," Coluber constrictor flaviventris, that was on display in the terrarium, had just finished laying eight eggs. The eggs must all have been laid between 7 and 9 o'clock as I had visited the terrarium before starting on the field trip at 7 o'clock.

The egg membrane of the last egg to be laid was still very moist and at one end was thickey and less transparent. It was thought this thickened end was probably first for fear I would break it. The membrane soon dried and became leathery and firm to the touch. This membrane was a milky white and at one end was probably first extruded by the snake in the laying of the egg. The eggs felt rough to the touch because they were covered with many small granules.

When I first discovered the eggs which must have been very soon after the last egg was laid, the snake was rather sluggish and inactive. She soon crawled into the water pan and lay coiled with all of her body, except her head submerged. About fifteen minutes later, I took her out of the water pan and attempted to take her picture. I found that she was now very active and when cornered would strike viciously.

As I couldn't find any information about the egg-laying habits of this snake, I placed two eggs in rotting vegetable matter, two in barnyard manure, two in dry sand and two in moist sand. Unfortunately the eggs were evidently infertile, for in a few days all of the eggs began to shrivel and have a crushed in appearance. The snake had been in the terrarium two weeks previous to the laying of the eggs, so the chance that the eggs were fertile was small. By July 22 the eggs were all so shriveled that there was practically nothing left of them but the egg membrane.



THE YOSEMITE NATURAL HISTORY ASSOCIATION
ITS PURPOSES

1. *To gather and disseminate information on the wild-life of the Sierras.*
2. *To develop and enlarge the Yosemite Museum (in co-operation with the National Park Service) and to establish subsidiary units, such as the Glacier Point lookout and branches of similar nature.*
3. *To promote the educational work of the Yosemite Nature Guide Service.*
4. *To publish (in co-operation with the U. S. National Park Service) "Yosemite Nature Notes".*
5. *To study living conditions, past and present, of the Indians of the Yosemite region.*
6. *To maintain in Yosemite Valley a library of historical, scientific, and popular interest.*
7. *To further scientific investigation along lines of greatest popular interest and to publish, from time to time, bulletins of non-technical nature.*
8. *To strictly limit the activities of the association to purposes which shall be scientific and educational, in order that the organization shall not be operated for profit.*

FROM THE NATIONAL CONFERENCE ON OUT-DOOR RECREATION

Called by PRESIDENT COOLIDGE

"THAT THE CONFERENCE ENDORSE NATURE STUDY IN SCHOOLS AND THE EXTENSION OF THE NATURE STUDY IDEA TO EVERY AMERICAN SCHOOL AND FAMILY; . . . . . THAT THE ESTABLISHMENT OF MUSEUMS OF NATURAL HISTORY IN NATIONAL PARKS WILL INCREASE THE EDUCATIONAL RECREATIONAL VALUE OF THE PARKS".—*Resolution of the Conference.*