DEPARTMENT OF THE INTERIOR
HUBERT WORK, SECRETARY
NATIONAL PARK SERVICE
STEPHEN T. MATHER, DIRECTOR

YOSEMITE
NATURE NOTES

VOL. VII JANUARY, 1928 NO. 1

"LEARN TO READ THE TRAIL-SIDE"

YOSEMITE NATIONAL PARK, CALIF. 192

This is the official publication of the Educational Department of Yosemite National Park. It is published each month by the National Park Service with the co-operation of the Yosemite Natural History Association, and its purpose is to supply dependable information on the natural history and scientific features of Yosemite National Park. The articles published herein are not copyrighted as it is intended that they shall be freely used by the press. Communications should be addressed to C. P. Russell, Park Naturalist, Yosemite National Park, California.

E. P. LEAVITT
Acting Superintendent

YOSEMITE NATURE NOTES

THE PUBLICATION OF
THE YOSEMITE EDUCATIONAL DEPARTMENT
AND THE YOSEMITE NATURAL HISTORY ASSOCIATION

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SCHOOL OF FIELD NATURAL HISTORY

ANNOUNCEMENT OF 1928 SESSION

From the Yosemite Educational Department

The Yosemite School of Field Natural History is a summer school for the training of naturalists, nature guides and teachers of natural history, where emphasis is placed on the study of living things in their natural environment.

Its aim is to train students to study and interpret living nature that they may better enjoy life and also lead others to similar profit and enjoyment, thus making an educational contribution to the conservation of natural resources.

The establishment of the Yosemite School of Field Natural History resulted from a demand for a training in field studies and a desire on the part of the National Park Service and the California Fish and Game Commission to establish a training school for nature guides, teachers of natural history and Boy Scout and Camp Fire Girl leaders looking toward better knowledge of wild life and its conservation. This school seemed a natural outgrowth from the now well-established Yosemite Nature Guide Service.

Field Studies Develop Enthusiasm

From its beginning in the summer of 1925, both instructors and students have been pleased with the outcome of the venture. Students unanimously speak of the work as being the most useful and profitable they have ever taken. The instructors are convinced that the emphasis on field studies develops enthusiasm and constitutes a needed supplementary training. Students of past seasons have made good use of their training during succeeding years and many have found places as nature guides, or nature counselors in summer camps and in national and state parks. Having reached its fourth year, the school is no longer an experiment.

From the first, applications have exceeded the quota of students and now that the school is better known it is possible to admit only about one-half of those who apply. As a consequence, advance enrollments for future seasons are being received.

Location

With easy accessibility to its extensive fauna and flora, typical of five life zones, and its unique geology, Yosemite National Park constitutes an ideal location for a school of field natural history.

The Yosemite Museum, a national park service institution, is headquarters for the school. Its extensive collections are available to students, and its library, lecture room, and well equipped laboratories afford the best of facilities for intensive work.

Term

Instruction is given from June 25 to August 10, thus coinciding with the University of California summer session at Berkeley. The high mountain field trip begins August 4 and ends August 10, 1928. This matchless excursion terminates the work of the season.

Organization

The school, a part of the Yosemite educational department, is under the administration of the superintendent of Yosemite National Park. The work was originated by the California Fish and Game Commission and brought to Yosemite in 1925. The Yosemite Park and Curry Company and the Yosemite National History Association also co-operate with the government in employing staff members.

Staff

A. F. Hall, B. S., chief naturalist, United States National Park Service.

C. P. Russell, A. B., M. A., park naturalist, Yosemite National Park.

H. C. Bryant, Ph. D., director of the school and Yosemite nature guide.

E. O. Essig, professor of entomology, University of California

Mrs. Enid Michael, Yosemite nature guide.

M. B. Nichols, Ph. B., Yosemite nature guide.

C. A. Harwell, A. B., Yosemite nature guide.

Shaler Aldous, A. B., M. A., Yosemite nature guide.

George M. Wright, A. B., Yosemite ranger-naturalist.

R. P. Hays, A. B., M. A., Yosemite nature guide.

Graduate Work

Although it has been found impossible to allow students to reenroll the year following graduation from the school, yet some found it profitable to return to do advanced work in following years. Use of equipment and direction by the staff is made available to such students.

COURSE OF STUDY

Lectures and Laboratory

1. Geology and physical geography of the Sierra Nevada.—C. P. Russell.

2. Plant and animal distributions. Life zones.—H. C. Bryant.

3. Botany—(a) Common trees and shrubs.—Mrs. Enid Michael. (b) Forestry.—A. F. Hall and G. M. Wright. (c) Flowering plants.—Mrs. Enid Michael. (d) Algae and fungi.—M. B. Nichols. (e) Ferns and mosses.—M. B. Nichols.

4. Zoology — (a) Invertebrates: Insects, molluscs, etc. E. O. Essig and Shaler Aldous. (b) Common vertebrates: Fishes, H. C. Bryant; amphibians and reptiles, H. C. Bryant and R. P. Hays; birds, H. C. Bryant, Mrs. Enid Michael and C. A. Harwell; mammals, C. P. Russell.

5. Conservation of natural resources, H. C. Bryant.

Field Study

1. Field trips and study of the fauna and flora of the valley floor. Hours, 8 a. m. to 12 m. daily except Saturday and Sunday.

2. All-day field trips each Saturday to the "rim" of the valley.

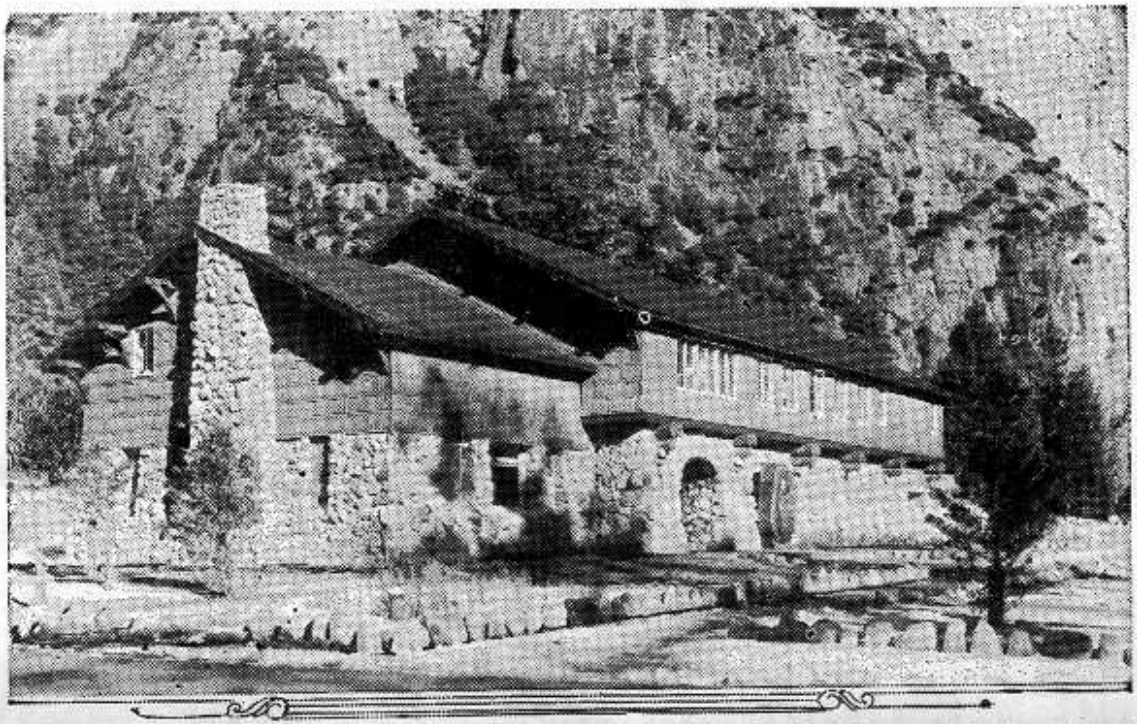
3. Special collecting trips for rarer forms of plants and invertebrate animals.

4. A special problem, selected by the student, and necessitating field work with weekly reports of progress.

N. B.—Several mountain miles are covered in various field excursions and the Saturday trips necessitate a climb of 3000 feet.

Tuition and Fees

This schooling is a contribution to nature education by the National Park Service with the aid of the California Fish and Game Commission, the Yosemite Park and Curry Company, and the Yosemite Natural History Association. No



Well equipped laboratories and a lecture room provide facilities for the indoor work that must be done in conjunction with field work. Here, too, students may gain information on and some training in the founding and management of a national park museum. Not of least importance is the shower room open to students at all times.

tuition is charged. Expense is thus limited to a $5 registration fee and to sundry materials such as notebooks, collecting apparatus, transportation, food, housing and clothing. Text books, stationery, drawing materials and laboratory supplies are provided by the school.

Daily Program

8 a. m. to 12 m.—Regular morning field trip. (Except Saturdays, Sundays and holidays).

2 p. m. to 4 p. m.—Lectures and laboratory.

Saturdays, all day field trip to heights above valley, start 7 a. m.

8 p. m. to 10 p. m.—School camp fire. Nature program, open to public.

The museum laboratories are open to students for study, 7:30 to 10 every evening, except Sunday.

High Country Field Trip

On August 4, the class, under leadership of an instructor, will leave Yosemite valley for a week in the high regions of the park. The High Sierra camps operated by the Yosemite Park and Curry Company will afford convenient and comfortable accommodations. Expense of this special trip will be less than $30. Opportunity will be given for observation and study in each of the three upper life zones of Yosemite National park.

The Work Is Practical

The plan is to make the work supplement the lower division university courses in botany and zoology with the opportunity for field work. The course affords first-hand acquaintance with various living forms and enables a more intimate study of nature and less of books. Familiarity with living plants and animals, the lack of which many feel so keenly, will be stressed. Opportunity for practice in teaching, leading parties afield, in presentation of nature lore at the campfire and in writing nature notes will be given every student.

Examination and Grades

Emphasis will be placed on intensive field work and each student will be expected to know and identify all the more common Yosemite trees, shrubs, wild flowers, insects, fishes, amphibians, reptiles, birds and mammals. Grading will be apportioned as follows:

(a) Field observation and identification, 60 per cent.

(b) Teaching ability, 20 per cent.

(c) Notebooks, 10 per cent.

(d) Preparation of scientific specimens, 5 per cent.

(e) Familiarity with literature, 5 per cent.

Credit

The work offered is of university grade, but no university credit is offered. A National Park Service certificate is issued showing that the work has been satisfactorily completed.

Registration and Matriculation

The number of students in the 1928 session will be limited to twenty. Students will be accepted on the basis of date of written application after fulfilling educational requirements, which are two years of college work, or the equivalent.

All applicants are urged to take membership in the Yosemite Natural History Association.

Housing

It is hoped that students will, on account of sociability and other advantages, prefer to camp in a section reserved for students of the school. A tent for two with housekeeping equipment, secured from the Yosemite Park and Curry Company, pro rated costs $7 per week up. Groceries and meat are to be had at practically city prices. The camp is centrally located and has proved advantageous to students. Hotel or American plan camp accommodations are near at hand for those who find it impossible to camp. Free camp grounds are available for those who have their own equipment. If you plan to camp in the reserved section you should bring your own bedding. Send it by parcel post care of Housekeeping Camps Headquarters, preceding your arrival. All other personal effects should be sent by parcel post.

Clothing

Outing clothes are in order at all times and places. Comfortable walking shoes are necessary, as field trips include excursions covering many miles of mountain trail.

Further information will gladly be supplied by the National Park Service. Inquiries should be addressed to the Park Naturalist, Yosemite National Park, California.

THE 'RHINO BUCK' OF YOSEMITE

By George M. Wright

Yosemite has ever been noted for its unique displays of nature's handiwork. Now comes Old" Horny," addin ganother unusual phenomenon to the list.

Horny, often styled the unicorn buck, sports an extra horn which springs from a point about one-third of the way between the tip of the nose and the antlers. His strange appearance and extreme tameness have made this deer many friends. A regular supplicant for buttered bread at the back doors of valley dwellers, the unicorn buck has been also a familiar sight around Camp Curry. How it relishes the hand-fed dainties and a good old-fashioned back scratch now and then!

This buck is a well developed specimen of the mule deer which throng this region, being apparently normal except for the spiked snout and twisted, irregularly branched antlers. There are sixteen points or tines including those of the third horn.

For two seasons scientists have been studying the unicorn buck to ascertain its characteristics and reactions. The supernumerary horn is shed annually with the other two and in the spring a velvety knob appears in its place. Though the antlers remain in the velvet somewhat longer than is the case with the other deer, they are finally stripped clean.

A new snout horn was disclosed this year. But witness the difference—this time a two-pointed horn replaced the spike of last year.

Antlers of distorted shape are not uncommon among deer, being thought by many to be derived from abnormalities of the sexual organs. The existence of bucks possessed of a distinct third horn, however is very rare, occurring only once amongst many thousand individuals, according to Joseph Dixon, economic mammalogist of the University of California.

So Old Horny is a "very remarkable fellow" worthy of a place on the calling list of everyone who will visit Yosemite Valley next year.

"OLD HORNY"

The above sketch was made from a recent photograph and clearly shows the two-pronged antler growing from the buck's snout.

A NATIVE MOUSER

By C. P. Russell

Those residents of Yosemite Valley who resent the official order banning house cats from the park may very well make friends with the native Ring-tailed cat. How comparatively numerous these little-known animals are about Yosemite Valley homes is evidenced these snowy mornings by the many tracks in the back yards and on back porches. How desirable the nocturnal visits from Bassariscus may be is best known to those householders who have discovered the significance of sudden thumps and bumps in woodshed or attic. Most often such noises are accompanied by squeals of a throttled mouse, and indicate to the human resident that he is rid of one more nuisance.

Arthur Gallinson, who houses and dispenses government food supplies in Yosemite Valley, has long known the value of "Ring-tails." Just now he harbors two of the pretty animals in the government warehouse. It is characteristic of Ring-tailed cats to become friendly with human beings, and the mountain dweller who is fortunate enough to be favored by visits from them, can, with a little patience, make a valuable, furry friendship. In the days not so long past, when the Yosemite meat market stood among the great boulders under the south wall of Yosemite Valley, a certain female Ring-tailed cat did more to acquaint human beings with the friendliness of the species than have all others of her race inhabiting this gorge. Every afternoon, just as scores of Yosemite dwellers and tourists lined up to purchase their daily portion of beef or pork, the "Ring-tail" would sally forth from the rear of the shop and take a place on the suspended track of the meat crane, a few feet above the heads of the customers. The appreciative butcher fed her choice bits and occasionally she would jump down to the counter and submit to petting. This pet produced a family of young ones somewhere in the environs of the butcher shop but so far as I know, never paraded her babies before her numerous human acquaintances.

The Ring-tailed cat is not a cat, nor at all closely related to the cat family. As one might suspect, having noted its banded tail, the animal is related to the raccoon. Its general scheme of coloration suggests the same relationship, and it is possessed of a face that is truly pretty and astute. Its specific name is astutus!

Oregon, Nevada, Utah, Colorado, and Texas mark the northern boundary of the "Ring-tail's" range. Its southern limits are, according to E. W. Nelson, Costa Rica. In Mexico it ranges up to 10,000 feet above the sea, but in California it is most often found below 3000 feet. In the Mother Lode country it has been befriended by miners since the days of '49. In this region it is quite frequently referred to as the "miner's cat," because it so commonly moves into mountain cabins and destroys the mice that frequent them.

Judge Walter Fry of Sequoia National Park, who has written extremely valuable accounts of his observations on native animal forms, has this to say of the "Ring-

tail":

"On May 25, 1906, while I was camped at Rocky Gulch, Sequoia National Park, I saw two of these cats, an adult male and a female, beautiful specimens. Both were so good-natured and gentle that it was only necessary to feed them a few times to induce them to come into the cabin with me. They became so tame that they would eat from my hands, climb into my lap, and sleep in a bed that I prepared for them in the cabin. A few days after my arrival the female had three kittens, about the size of newly born house cats. For two or three days the mother would not permit the father to come near them, but later the family occupied the one bed. The kittens grew rapidly and when three weeks old the parents began to carry food to them; at the age of about eight weeks they accompanied their parents on nightly hunts, returning to the cabin in daytime. Later I was relieved by a detachment of soldiers who also made pets of the Ring-tail family so that they became as tame as any house cats."

California gives protection to this attractive and truly desirable fur bearer during eight and a half months each year. Those who conduct poison campaigns against coyotes, however, are limited to no particular season, and it happens that the "Ring-tail" is a fairly frequent victim of the poisoners. It should afford consolation to nature lovers to know that National parks are free from those influences that set the dangerous "extermination campaigns" in operation.

A BATTLE TO THE DEATH

By DAVID KECK

The struggle for existence is a very real problem to all living things. In the animal kingdom the possibility of living a long life is daily fraught with dangers. The fact that all animals must eat to live means that countless thousands are killed each day to provide the necessary sustenance for their foes. One assumes that the smaller animals are hunted by the larger, which, in turn, are in danger of capture by still larger enemies. Usually, the result is the same. A hungry hunter spots his prey, which he traps and kills, often without giving the victim time to utter a cry, much less a chance to defend himself.

However, there are times when the proposed victim of this carnal feast upsets the plans of the would-be banqueter to the extent of killing him. One such battle to the death occurred at Mather, on the western boundary of the Yosemite National Park. One day last spring, just at dusk, the writer found a mature male robin crouching beside a board in a meadow. Closer approach proved him to be injured, for he held his position, but assumed a belligerent air. An attempt to pick up the bird aroused his instinct of self-preservation, and with fluffed-out feathers, he pecked most sharply at the outstretched hand. The robin was uncommonly frightened and trembled visibly when held. A search for the cause of the robin's plight disclosed a large Cooper hawk lying in the grass some ten feet away, stone dead. One eyeball was pulled from its socket and hung against his beak. The story in circumstantial evidence had here been told. A patch of feathers and skin had been torn from the robin's breast by the first rush of the hawk, but one well-directed blow from the robin's sharp beak had pierced the brain of his assailant. The hawk was a large adult and apparently weighed three times as much as the robin. A slight miscalculation in the hawk's strike had cost him his life.

The robin was taken in and placed in a box to spend the night. The wound on his breast was a superficial one, and it was hoped he would recover. However, he died before morning from the shock of his experience, and thus this became a double tragedy of the woods.

MOUNTAIN QUAIL

By George M. Wright

Bizarre indeed is the color pattern of the mountain quail. Bedecked as it is with plumage resembling some triumph of futuristic design, this largest of the quails contributes a special thrill of surprise to the experiences of every tramper who glimpses its plump form scuttling away through the underbrush. Like many another of nature's most exotic creations the very charm of the bird is enhanced by the rarity of opportunities afforded for making intimate observations.

When winter comes, however, the mountain quail migrates, literally on foot, to lower altitudes in search of a food supply that is not packed away in cold storage under the snow. Individuals may be found on the floor of Yosemite Valley where they have occasionally become quite tame around the government sheds and barns. More commonly they may be heard calling from the hillsides at El Portal where they commingle with the widely known valley quail this season, at least.

The visiting species is easily identifiable by reason of its larger size, slender crested plume, and the rich chestnut coloring of throat patch and sides, emphasized by conspicuous bandings of white and black. The plume varies from two and one-half to four inches in length, the two component black feathers being laid back whenever some excitement does not cause them to be displayed in an erect and vigorous manner. At such time this elegant quail presents an alert military aspect. The female is distinguishable less perhaps by any recognition marks than from her more quiet demeanor, though the coloration is a trifle less vivid and the plume shorter as the two sexes are seen side by side.

Its Nesting Grounds

With the advent of spring, the mountain quail returns to nesting grounds ranging through the main forest belt up to 9500 feet. Old birds or families, with young may sometimes be seen and are almost sure to be heard, from the trails of Yosemite's rim wherever there is adequate brush to provide safe retreats.

The nests, which take the form of depressions lined with leaves and grasses, are carefully concealed from prying eyes under some bush, fallen stick or protective rock. At least one pair in the past has made effective use of the burnt out butt of a small conifer for this purpose. The eggs numbering from five to fifteen, occasionally even more, are of a uniformly pale reddish buff without other marking.

To judge from the size of the broods brought off the nest, one might at first thought conclude that mountain quail are abundant. This is very far from the case, being another example of a provision of nature to insure the perpetuance of the species. As a matter of actuality the quail is so steadily as well as stealthily pursued by such wily predators as the wildcat and fox that only a small percentage of the young attain to maturity.

Though this quail has some advantage over its lowland relative inasmuch as there is not the same tendency to gather in large flocks or to break from cover en masse when disturbed, the hunter nevertheless pursues his game even more relentlessly as civilization encroaches steadily upon the wildest fastnesses. And though the mountain quail is favored with some protection at the present time, let it receive every aid that sentiment coupled with common sense should give to such a harmless and beautiful dweller in our glorious Sierra.

YOSEMTIE NATURAL HISTORY ASSOCIATION

YOSEMITE NATIONAL PARK
CALIFORNIA

YOSEMITE MUSEUM

Dear Friend:

Here are three good reasons why you should become a member of the Yosemite Natural History Association:

1. It will keep you in touch with Yosemite through "Yosemite Nature Notes".

2. It offers you opportunity to secure NATURE MAGAZINE, AMERICAN FORESTS AND FOREST LIFE, or both, at an unprecedented low price.

3. You materially aid a non-profiting Government educational activity (The Yosemite Museum and its attendant nature guide service) when you remit your membership fee.

Please read a sample of "Yosemite Nature Notes", consider our purposes, and don't overlook the benefits of the combination offers with the American Nature Association and the American Forestry Association. Remit by check or money order.

Cordially yours,

C. P. Russell
Park Naturalist

GLEANINGS FROM THE PAN PACIFIC CONFERENCE

HONOLULU HAWAII 1927

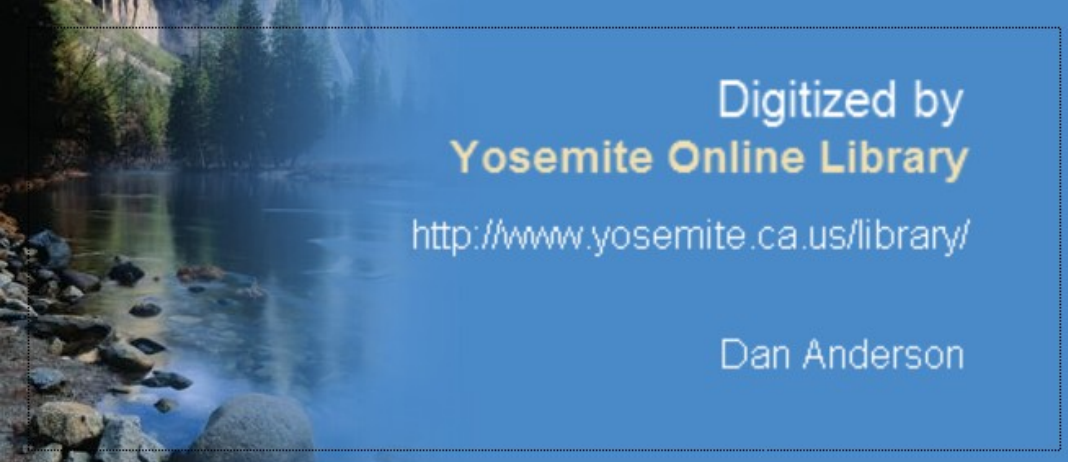
"Through its educational division the National Park Service is endeavouring to help every visitor enjoy these great areas with an enjoyment based upon understanding."
- *Ansel F.Hall (Chief Naturalist).*

"National Parks have become creations of government in many countries, and their use by the people is primarily for studying nature and recreation in the wilds."
-*T. A. Jaggan. (Director, Hawaiian Volcano Observatory).*

"Natural beauty, may be considered as capital and utilities, and visiting guests as the interest on that capital." -*Heiji Uyehara (President of Japanese Landscape Architectural Society).*

"It is up to the museum to bring people face to face with nature; to give them the inspiration which comes from discovering facts for themselves." -*Edwin H.Bryan. (Bishop Museum, Honolulu).*

"To him who in the love of nature holds communion with her visible forms, she speaks various languages."
- *Bryant*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