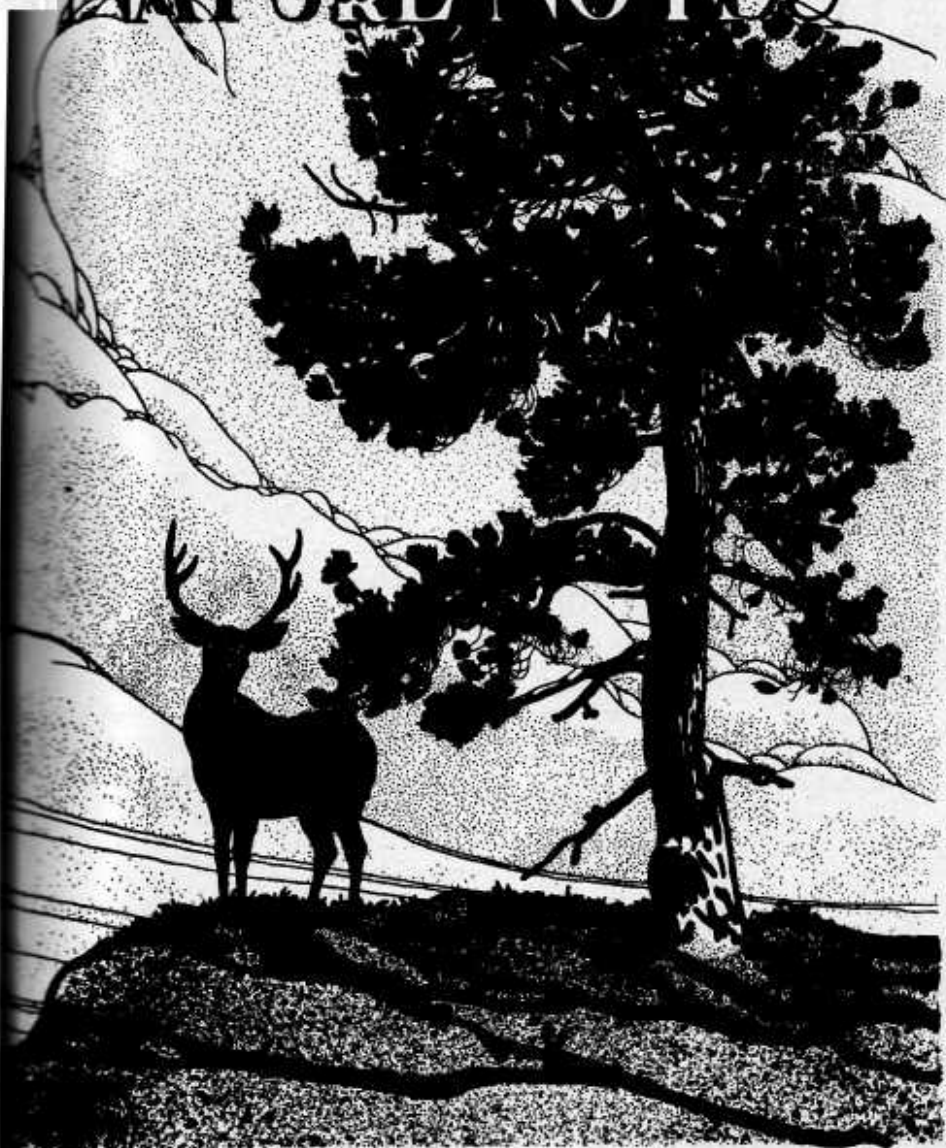


YOSEMITE NATURE NOTES



Volume IV

August 18, 1925

Number 13

A PERSONAL INVITATION.

YOSEMITE NATIONAL PARK IS YOURS! WE OF THE NATIONAL PARK SERVICE WANT TO HELP YOU TO MAKE FRIENDS WITH YOUR PARK AND TO UNDERSTAND IT IN ITS EVERY MOOD. ALL OF THE FOLLOWING SERVICE IS OFFERED TO YOU *free* BY YOUR GOVERNMENT:

Visit the Yosemite Museum!

Here you will learn the full story of the Park;— what tools were used by the great Sculptor in carving this mighty granite-walled gorge; who lived here before the white man came; how the Days of Gold led to Yosemite's discovery; how the pioneers prepared the way for you; and how the birds and mammals and trees and flowers live together in congenial communities waiting to make your acquaintance.

Plan your trail trips on the large scale models in the Geography Room.

The Yosemite Library in the museum provides references on all phases of Yosemite history and natural history.

Popular lectures on Yosemite geology and other branches of natural history are given by nature guides at scheduled times each day.

The nature guide on duty will be more than willing to answer your questions on any subject.

Go Afield with a Nature Guide!

Take advantage of this free service that will help you to know your Park. A competent scientist will conduct you over Yosemite trails, and from him you may learn first hand of the native flowers, trees, birds, mammals, and geological features.

See Schedule of Nature Guide Field Trips.

Visit Glacier Point Lookout!

From there you will obtain an unexcelled view of Yosemite's High Sierra. The binocular telescope will bring Mt. Lyell to within one third of a mile from where you stand; you can recognize friends climbing trails several miles away. The Nature Guide in attendance will help you to operate it and will explain what you see.

A small library is at your command.

You will enjoy the informal nightly campfire talks given here.

Attend the Nature Guide Campfire Talks!

In addition to the museum lectures members of the educational staff give talks as a part of the evening program at Camp Curry and Yosemite Lodge. Non-technical explanations of how Yosemite came to be; what you may expect of Yosemite bears; how the local Indians lived; what birds you see about your camp; what trout you will catch in Yosemite waters; how you may best visit the wonderland of the summit region; and scores of similar subjects are given by the National Park Service Nature Guides.

ALL OF THESE OPPORTUNITIES ARE PROVIDED FREE OF CHARGE BY YOUR GOVERNMENT.

—TAKE ADVANTAGE OF THEM—



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A NEW CHARGE AGAINST THE GOPHER

By C.P. Russell

Park Naturalist, Yosemite National Park

Recently Chief Electrician J. W. Emmert brought to me a unique bit of evidence that his very essential department is not entirely at peace with all members of Yosemite's wild life. One would not expect electricians to meet real animal obstacles in anything smaller than obstreperous bears, but this time J. W. E. had indeed met grief in unalloyed form and it was due to no four-footed monster either.

Modern service methods have developed a means of removing electric lines from the tops of strings of unsightly poles and relocating them in subterranean conduits, the presence of which sensitive, nature-loving park visitors never divine. Copper wires are encased throughout their length with a continuous sheath of lead. Protected thus they are buried beneath the surface of the ground and confident electricians regard the interment as good for a life-time. Nothing short of a trench digger was to disturb the lines laid in Yosemite; the lead resisted the decomposing tendencies of soil water, the enclosed live wires conveyed their burden to the designated consumers, and the

electrical department smiled with satisfaction.

Then the unexpected happened. Short-circuits occurred and consumers cried for help. Fortunately confident electricians are not over-confident. Along with their scheme for burying live wires they also developed a way of locating possible trouble in the under-ground conduits. Mr. Emmert employed a Wheatstone Bridge and uncovered the broken spot without excessive shovel work. It was sections of the destroyed lead insulations found that he showed to me. I am including with this a photograph of the damaged cables so that you may view them too.

They bear the unmistakable teeth marks of a rodent. Mr. Emmert found tell-tale gopher workings at the spot and he established a case against the Yosemite pocket gopher when he located burrows of that animal leading up to and away from the gnawed conduits. Now he wonders whether *Thomomys* is developing an appetite for this new lead-encased root system or whether the wires in question merely happened to be in the way of the subterranean worker.

MERELY MYRMELION

By R. D. Harwood

Along sandy banks, unprotected from the sun's glare, one often finds tiny, perfectly symmetrical pits. These pits are always in loose material, although not necessarily in sand. There are some on the medial moraine near Clark's bridge which are made in well-pulverized decayed wood. Careful observation will reveal the fact that these pits are situated in a region frequented by ants. In fact, one was found in the excavation of an ant home.

A thorough investigation will show how these pits are formed. Sometimes a pair of strong paws may be seen projecting from the base, but the quickest way to see these jaws is to drop a small ant or a particle of sand down into the funnel-shaped trap (for trap it truly is), when the pair of jaws will suddenly appear in the attempt to seize the victim. Often the jaws will again disappear along with the ill-fated wanderer.

But let things remain as in a state of nature and see what happens. If you watch long enough you will see some ant try to cross this spot in the most direct line. As soon as he starts over the edge, the loose soil particles immediately begin to roll and unless the ant is very big, he tumbles to the bottom and into the very active jaws. In the eagerness to reach the victim the ant lion, for so he is appropriately named, will toss away the dislodged particles with considerable force.

A Hard Fellow to Capture

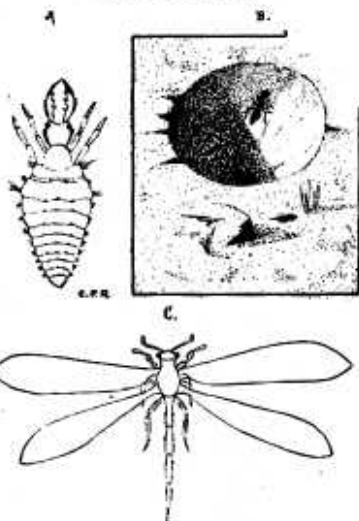
Now let us try to discover what sort of terrible monster this ant lion is. There are several approved methods of capture, all of which require considerable skill to bring 100 per cent results. One method is to drop tiny sand grains into the pit and then grab the lion as he tosses them out. However, the one which is more generally successful is to suddenly scoop under the vortex and then carefully sift the sand from one hand to the other. Sharp eyes are here invaluable, for the color and habits of the ant lion work in its favor. Success reveals a soft, pointed abdomen, dark gray in color and possessing a mottled and wrinkled appearance. This roughness is due both to the segmentation and to the possession of tiny tubercles sparsely clothed with hair. In front of this is a tiny thorax to which are attached six rather inconspicuous legs. Ah, there is a clue to the identity. It must be an insect. At the extreme anterior end is the head which to the casual observer, is a pair of powerful, sharp jaws. The jaws are so much out of all

proportion to the rest of the insect body that all else seems dwarfed. The jaws are the claws as well as the masticators, and therefore must have an extreme development.

Watching the Ant Lion Work

If you will place the ant lion on some sand and water, you can see just now the pit is made. Unless he "plays possum" he will immediately begin working his abdomen backward and downward. In a very short time he is completely hidden. Then, if undisturbed, he will soon start throwing the sand away from him. This is accomplished by sudden violent jerks of his head and thorax while grasping the sand in his jaws. While doing this he is also working downward, so that in time a perfect in-

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**THE ANT LION OR DOODLERUG**

(A)—Larvae of ant lion. In this form the insect passes a period of its life at the bottom of a pit. (Fig. B.) The great mandibles enable it to overcome the ants which slide to the bottom of the little crater.

(B)—A pit constructed by the ant lion. Into this perfect trap many ants are precipitated when they crawl over the edge.

(C)—The adult ant lion does not in the least suggest that it has experienced a youthful life of murder.

—(Drawings from life and from Kellogg's "American Insects")

AFIELD WITH THE NATURE GUIDES

BEARS AT GLACIER POINT

A bear with three cubs is an unusual sight, but one large cinnamon bear appears nearly every night at the Glacier Point garbage dump with three very small cubs. She arrives usually considerably after dusk, but during the recent full moon she was observed several times. The cubs were chased up a large yellow pine some one hundred feet from the piled garbage, and there on the lowest limb, thirty feet above the ground, they clambered around restlessly expressing their feelings by means of short whines while the mother watched from below, but became quiet when the old bear went down to feed.

After some time two large bears came up from the dump, singly, but did not attract the youngsters. Then the mother appeared and walked into the brush, where she waited while the cubs descended, making a great noise with their scratching as they backed down. When within three feet of the ground they jumped out of the tree and landed running.—Dana D. Keck.

TWO CHARMING MIMULUS

The hiker, making his way up the Ledge trail, in the morning, gets the full benefit of the Sierra sun. After a time, however, he turns into a narrow chimney and sweet stream voices soothe him as he is cooled by the shadow of walls. Free from the mental lethargy induced by heat and exertion, the tramping may look about him, for there is much of beauty here.

Water-loving Creek Dogwood (*Cornus pubescens*) forms cool thickets; fresh mosses and water-loving plants make gardens along the stream. As spring travels up the slopes the flowers along this trail change from day to day and from week to week. The two most showy flowers on the 12th of July were members of the Figwort family and of the genus *Mimulus*. The pink *Mimulus* (*Mimulus lewisii*) shows her graceful, leafy stems with clusters of large pink blossoms. Delicate and lovely, these flowers increase in size from day to day and lavishly receive all who pause to admire, but if nipped, instant resentment is shown and soon from the lifeless stems droop withered flowers.

Golden-heads (*Mimulus lewisii*) is the other showy Figwort. These plants form congenial colonies and from their massed stems and leaves rise the golden heads. Looks of mischievous glance from the golden flowers to the eyes that behold them. A daring spirit is this jolly mimic that follows the mountain streams into the high mountains, to the slopes of Dana, in the drip of hidden springs, this plant hangs the golden banner. This mountain form has short stem and heads twice the size of those on the Ledge trail and are about an inch across.

With a corolla that in shape resembles the garden Snap Dragon, the *mimulus* is an easy flower to recognize.—Enid Michael.

A BUCK REGISTERS DISAPPROVAL

One of the bucks being fed daily at Glacier Point Hotel recently registered disapproval in a very positive manner. One of the guests offered him some choice bit for which he did not care. Instead of sniffing and walking away as an ordinary deer would have done, he raised one hoof and gently struck the lady's hand. Even then he did not walk away, but stood waiting for a bite more to his liking.

In the fall a buck tame enough can provide. Now is the time when to feed from one's hand may be dangerous. Caution should be used in approaching them, for during the madness of the rutting season it is impossible to predict what their movements may be.—R. D. Harwood.

A CLEVER BEGGAR

Those who have lunched at Glacier Point have been attracted by the grand old patriarch of the ground squirrels. He is fat and grizzled, apparently by many battles, which ought to indicate age and prowess. He has learned to trust man, for he will feed from the hand on the dining porch of the hotel. Recently he exhibited an extreme of trust or of greed triumphing over fear. A man coaxed him onto his lap to take food from his hand. The squirrel sat there while he ate all the marmalade off the bun proffered him. Then, apparently having had enough, he ran with a large piece remaining to the protection of a nearby chinquapin bush. Here, after two futile attempts, he finally got it carefully placed in the ground. The hole was considerably deeper than the food deposited therein and after burying it he carefully stamped down the ground over it. Then he dug one more false cache before scurrying back for more food. What a civilized beggar!—R. D. Harwood.

A SUSPICIOUS SQUIRREL

When coming along the trail below Vernal Falls a group of hikers became much interested in a ground squirrel because of his peculiar antics. At the approach of the small party, the squirrel ran suddenly from the lower side of the trail to a point about four feet from the trail on the bank above and started to dig as though his very life depended upon the excavation of some deeply buried treasure. However he soon reached the luscious base of the rein orchis and, dropping the upper less tender part, he ran a few feet to a rock where he sat quite undisturbed by the presence of four humans while he nibbled contentedly on the root. When someone reached up onto the bank and picked up the rein orchis stem, he watched the offender most attentively. His attitude during the whole proceeding was that of suspicion, as though he thought that the people had designs on that very particular root and stem.—R. D. Harwood.

DEER TRAILS

When the first snows of winter fall in the high country the deer, which have made this country their home, start their trek to the lower country.

Going in single file, they start down the ridges toward the snow line. If the storm is bad they move rapidly, paying little attention to obstructions. In fact, even a human being seems to concern them but little. Their instinct is set on one thing, and they never swerve from their downward course.

The trails lead down the ridges on one side of a canyon, with no idea of grade—the straightest way down, then straight up the other side along the top of a ridge.

Sometimes great numbers of deer must pass over these trails, especially those which are directly between the summer and winter feeding ranges. Often these trails are worn down to a foot in depth, as is evidenced on Pilot Peak ridge, just west of the park boundary.

If the storm is mild or intermittent they do not travel so rapidly, but linger along the trails to browse here and there on some choice plant.

After once arriving at the snow line numerous trails are made through the thickets and across gulches in their wanderings from one browse patch to another. These sometimes show more care in grade than the main arteries of migration, being often of such easy grade that a horse can easily traverse them. In these trails one often sees the track of the mountain lion where he has wandered through in search of deer that are not experienced in his depredations.

In their summer home deer are not given to following trails to any such extent as they are in winter, being content to wander about through the forests unhampered and fully fed. They do, however, often make well-defined trails to some favorite watering place, as at Tamarack creek, just twelve miles west of Yosemite.

Here I found several trails cut into the steep slopes of the moun-

tains where deer had been in the habit of coming to drink. These trails were deep and dusty, showing frequent use by presumably many deer.

Deer trails are often made through places a person on foot can scarcely traverse, going through the thickets, under low-hanging limbs, over rocks, and straight, or nearly straight, up and down slopes upon which a man can scarcely stand.

How a large buck mule deer can maneuver his big antlers through some of the underbrush these trails traverse is a marvel, but still he is able to dash through at full speed without any apparent difficulty.—D. D. McLean.

* * *

TWO-WINGED GIANTS

Like giant mosquitoes are the slender crane flies which are often attracted to the lights these summer nights. Fortunate indeed that they do not possess the beaks and appetites of their cousins in proportion to size. They would then rank with the vampire bats of South America, whose blood-sucking habits have brought them fame of a sort.

Strong, slender wings carry these giants of the insect world as they flap from light to tent wall. The long spider-like legs are usually held pendant from the body when in flight, showing a resemblance to the bird for whom they were named. It is no uncommon sight to see these flies with legs reduced in number, as they are very easily broken off.

The eggs of this species are black and are dropped by the female as she flies low over the water. Soon these eggs hatch into almost transparent legless larvae which live on the vegetation in not too swift streams. As one observes these twisting "worms" he can watch the workings of the digestive system and see them as they protrude and retract their sharp jaws.

Of the many crane flies found in Yosemite, this giant is the most interesting as well as the most conspicuous.—R. D. Harwood.

MERELY MYRMELION.

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anted cone is formed. An examination will show that there is a very close correlation between the size of the ant lion and that of the pit formed by it.

This ant lion or doodle bug, as it is often called, is a curious insect in the marked difference between the larva and the adult. When the greedy ant lion has grown to full size, he stops eating and changes to the pupa. Here, after a brief period of transformation, he emerges as a graceful

gauzy winged adult with a long and slender abdomen. They are often to be found about lights at this season of the year and they will become more numerous as summer advances. They resemble damselflies in a general way, but they can easily be identified by their consistent gray color, their very long slender abdomens, and their conspicuous antennae. The scientific name of the genus is Myrmelion, of which ant lion is the English equivalent.

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.

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Your check for \$2.00 sent to the Park Naturalist, Yosemite National Park, will help to pay the cost of its publication for one year and make you a member of the Yosemite Natural History Association for the same period.

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.



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Dan Anderson