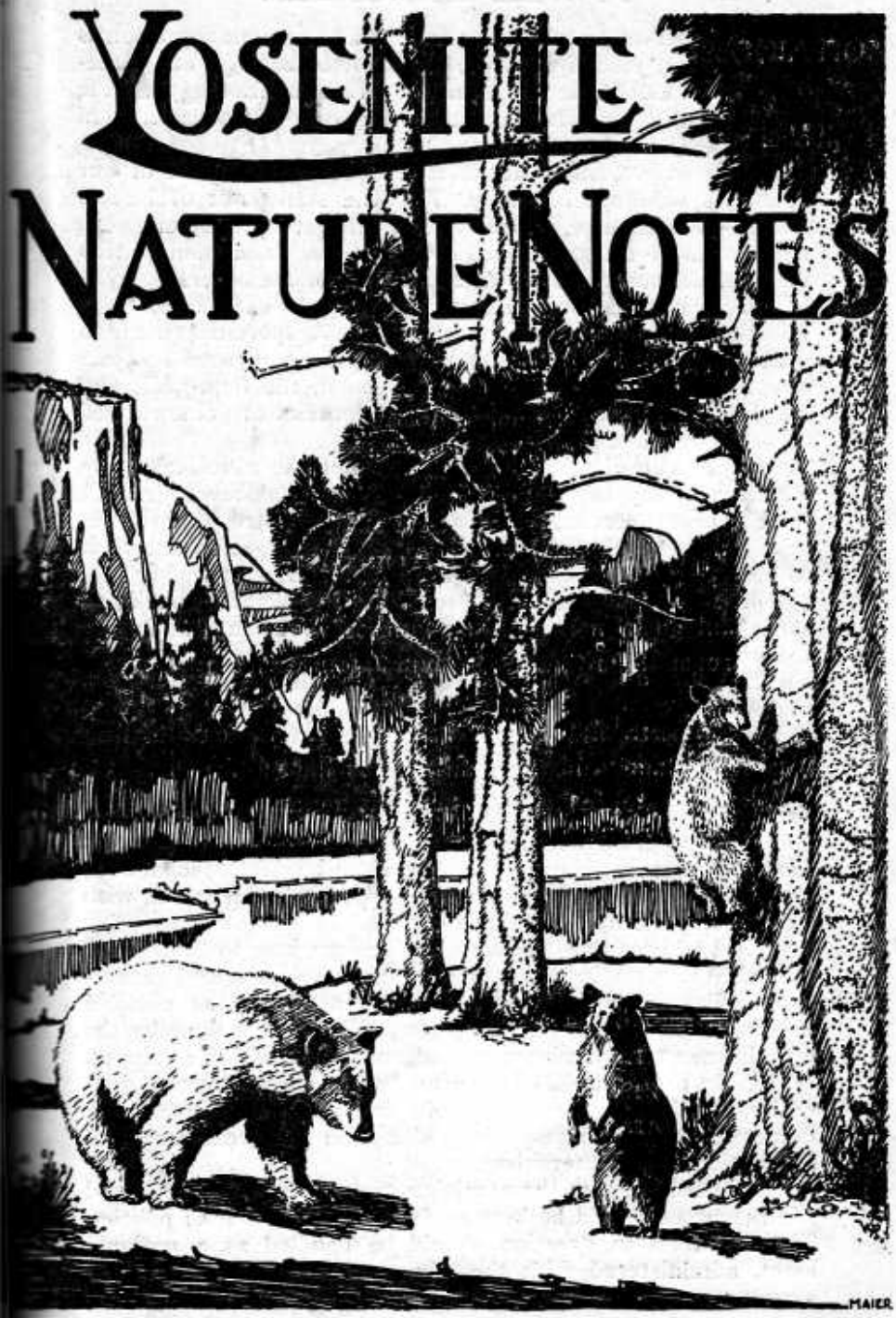
YOSEMITE NATURE NOTES



Volume V October 31, 1926 Number 10

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

Volume V October 31, 1926 Number 10

PLANTS USED BY YOSEMITE INDIANS

By Florence Brubaker

Yosemite School of Field Natural History

"YOU may kill me, sir captain," said old Chief Tenaya, after the murder of his son by the white men, "but you shall not live in peace. I will follow in your footsteps. I will not leave my home, but be with the spirits among the rocks, the waterfalls, in the rivers and in the winds—wheresoever you go I will be with you."

Is it this, thy spirit, Tenaya, which causes hurried wayfarers to pause, hushed and peaceful beneath the pines and cedars; to stand reverently upon the heights of the valleys, searching inwardly for the most worh-while things of life; to sit beside streams, drinking anew of courage, and to commune with their wild friends, gaining new visions of trustfulness and loyalty? If it be so, let thy spirit dwell here evermoré, for of these things the white man hath great need.

The original inhabitants of Yosemite Valley were Ah-wah-nee-chees, or dwellers in Ahwahnee, the "deep, grassy valley." They were a powerful people, until ravaged by wars and fatal black plague. The few survivors fled, leaving the deep, grassy valley uninhabited. Finally there came back one Tenaya, who, claiming to be a descendant of the Ah-wah-nee-chee chief, gathered about him some of his father's people, left the Monos, with whom he had been living, and reclaimed the valley as his birthright. To this valley the new tribe gave the name "Yosemite"—deriving it from the name of the great grizzly bear—Oohahnate or Ohamite. "Tenaya said that the name had been given to his band because they occupied the mountains and valley which were the favorite resorts of the grizzly bears—and his people were expert in killing them; that his tribe had adopted the name because those who had bestowed it were afraid of the grizzlies and also feared his band." Be that as it may, both the grizzly and the Yosemite have vanished from the valley—and one has but the "spirit among the rocks, the waterfalls, in the rivers, and in the winds"—to remind one of their presence.

From the accounts of such men as Bunnell and Galen Clark, who knew the Yosemite Indian as he

lived in his happy valley—and from legends passed on by word of mouth and eventually recorded, one can tell something, however, of how he met the needs of his life. During six weeks of the summer of 1926 I have endeavored to gather such material as I could find concerning the use of plants and plant products by the Indians of the valley, and for the sake of convenience, have divided such plants under the headings of food, shelter and miscellaneous usages.

Food

Contrary to popular opinion, the Indian was to a considerable degree an herbivor. One likes to think of the brave returning from the hunt with a buck strung over his shoulder—whereas in reality, the familiar picture would be the squaw, returning with her conical burden basket hung from her forehead or strapped to her back, and filled with acorns.

As is true of many of the California tribes, the acorn was the staple food of the Yosemite Indian. The acorns most highly prized were those of the black oak (Quercus kelloggii newb), an oblong acorn when mature, from one to one and one-quarter inches in length and three-fourths inch in width. The nuts are green and covered with a silken pubescense when immature, but later become smooth and of a reddish brown color. Acorns from Quercus agrifolia chrysolepis, and lobata were also used, but those of the black oak were the most desirable. The acorns were gathered in the fall and stored in caches or granaries called "chuck-ahs." Such granaries were basket-shaped, woven structures of willow sprouts, about six feet high and three feet in diameter, set on stout posts about three feet high. Sometimes additional longer outer posts were used as props. Over this willow basket small pines were thatched with the needles pointing downward to shed the snow and rain, also to safeguard the contents against invasions by squirrels or birds.

When filled the top of the cache was securely covered by bark and skins. Acorns were removed, upon need, from a small hole in the bottom of the storehouse. The hulls were then cracked from the acorns by means of a hammerstone and the kernels removed and ground in the mortars of "hoyas." These mortars were simply depressions in large, flat granite rocks, worn deeply cup-shaped by long usage. Such "mortar rocks" now mark the sites of former "villages" and seemingly were communistic affairs with varying numbers of mortar holes. The pestles or "metats" were crude, rough ended stones fitting the worn depressions. The stone was grasped with both hands and the kernels vigorously pounded into a fine, rich yellow meal. Before usage, this meal was leached to remove the tannin which gives the acorn an unpleasant, bitter taste.

For leaching, large shallow basins were made in clean sand and lined with fir branches. Nearby a fire was kindled over which stones weighing about four or five pounds were heated and dropped into baskets of water. When the water was hot, it was mixed with the acorn meal, making a thin gruel which was poured into the leaching pit. As the water drained off, more was added until the bitter taste was removed. This "sediment" of meal was then put into the cooking baskets of tightly woven wiregrass, thinned with water to the desired consistency, and cooked by means of hot stones. These stones were placed in and removed from the cooking baskets by means of a stirring stick made of tough oak sprout, doubled so as to form a round, open loop at one end. When cooked, the meal was either left until it cooled sufficiently to be taken in the hands and eaten as mush or "atole" or scooped out into smaller baskets and placed in cold water to harden into loaves which might be eaten when desired. Sometimes these loaves were softened with water and baked on hot rocks.

Older Indians Still Practice Ancient Methods

The above process, used by the Yosemites in 1850, according to Bunnell, is still practiced by the older Indians. In fact, just this summer we inadvertently trespassed a small Indian settlement where an old Indian woman, Maggie, was vigorously pounding acorns. We sat down beside her and chatted for some time gathering interesting bits of information concerning her life. She is an old Piute who has lived in Yosemite Valley for over twenty-five years, apparently without any close relatives, for her sons live over the hills with the Monos and her last husband, we gathered, had been "honorably dismissed." Her son was coming over for a visit and, as a special treat, Maggie was pounding a quantity of acorns for "biscuits." Being questioned, she informed us that she used "white men's bread" until she became tired of it, then reverted to her acorn bread.

Contrary to my preconceived ideas, she pounded, rather than ground, the acorns. Grasping the metat firmly with both hands she raised it high, bringing it down with great force, but with no grinding motion. The meal would this be scattered onto the surrounding rock, but she would deftly "scoop" it back, or brush it back with an "up-to-date" hairbrush. One of her Indian neighbors, who was likewise grinding meal, used a brush of the old type, merely a bunch of fibrous scales from the bulb of the soap plant (Chloragalum pomeridianum), rudely tied together. When the meal was as fine as desired, Maggie lifted it by the handful onto a winnowing tray of closely woven willow shoots. Holding this slanting

towards her, she would deftly toss the meal into the air, catching it again, and tossing it with steady rhythmic motions, so that the larger pieces o' facorns, which wer too coarse, would fall onto the mortar rock, and the fine meal remain on the tray. She would then begin grinding or "pounding" a new lot.

Maggie Said Her Biscuits Were Good

Maggie insisted that her biscuits were good and that white women liked them. Of their palatability, however, there seem to be conflicting opinions. Bunnell, writing of Savage's march to an Indian village near Wawona to demand surrender, says of his hungry men: "Bob McKee thought this a capital time to learn to eat acorn bread, but after trying some set before him by a young and accomplished squaw, as the major cynically termed her, concluded he was not yet hungry enough for its enjoyment." Again, he says of the "atola," or corn mush: "None of us were able to eat it, and we were quite hungry." It seems they were also offered acorn jellies and grass seed mush, but nothing was accepted save pinon nuts.

Tenaya's Tonic of Wild Grasses

On the other hand, the white man's diet was not suited to the taste of the Indian. Bunnell describes a scene in which Chief Tenaya, while held a captive by the whites, "made application to Captain Boling for permission to go out from camp to the place where grass was growing, saying the food he had been supplied with was too strong, that if he did not have grass he should die. He said the grass looked good to him, and there was plenty of it; why, then, should he not have it, when dogs were allowed to eat it? The captain said: 'He can have a ton of fodder if he desires it, but I do not think it advisable to turn him loose to graze.' The captain consented to the sergeant's kindly arrangement to tether him and he was led out to graze upon the young clover, sorrel, bulbous roots and fresh growth of ferns, which were then springing up in the valley—one species of which we found good salad. All of these he devoured with the relish of a hungry ox."

The "fresh growth of ferns" Tenaya longed for were the coarse, hairy shoots of the brake fern (Pteris aquilina), which grows so commonly in moist shaded regions over the valley floor and in side canyons. These were cut off when the fern shoot had just begun to uncurl, scraped to remove the hairs, and then eaten row or cooked. When cooked in boiling salt water and served on toast, Saunders declares, fern sprouts are most delicious.

It seems that most California Indians were particularly fond of grasses or "greens" such as clover and sorrel. The clover they ate raw, before the flowering stage, when the plants were still young and tender. They munched with this the parched kernels of the pepper nut (Umbellularia californica) California bay or laurel, to prevent indigestion. Lupinus bicolor, as well as several other species of lupines also formed popular "greens"—particularly when moistened with manzanita cider.

Bulbs an Important Article of Diet

Bulbs too formed an important article of diet, so common, in fact, that the Yosemites were one of a group of tribes known as "Digger Indians" by the early California settlers, on account of their not being good hunters and from their practice of digging various bulbous roots. Those most commonly used were the bulbs of squaw root, Carum gairdneri, the various brodiaeas, particularly the bulb of the harvest brodiaea (Brodiaea grandiflora) Calochortus venustus, sorrel (Rumex acetosella) and camass. According to Saunders, the Brodiaea grandiflora bulbs are best when cooked by slow roasting in hot ashes. However, he calls camass or "Quamash" the queen root of this clime. The popular Indian method of cooking bulbs was to place them in a hole about one foot deep, lined with flat stones which had been heated by building a brush fire over them, then removing the ashes and lining the pit with fresh grass and leaves. The bulbs were covered with another layer of grass and leaves and the hole covered with earth. In this "air-tight oven" the bulbs were allowed to steam for a day, or even longer—then removed and eaten immediately, or dried in cubes.

The Pine Nut as a Food

Pine nuts also formed an important article of food, and although the caches found by Savage's party "were principally of acorns—many contained bay (Umbellularia californica), Pinon pine (Digger Pine) and chinquapin nuts, grass seeds, wild rye or oats (scorched) dried worms, scorched grasshoppers and what proved to be the dried larvae of insects."

The digger or nut pine above referred to is the seed of the 'digger pine' (Pinus sabiniana). This was found around El Portal and formed the best local pine nut. However, the nuts of the pinon pine from the eastern side of the range (Pinus monophylla) were more desirable, but could be obtained only by barter. The seeds of the sugar pine (Pinus lambertiana) also were occasionally used.

Of the particular kinds of grass seeds used in this vicinity, little reference was found. Bunnell states that grass seeds were found in the caches, also that the black seeds of a particularly tough wire or bunch

See next page for explanation.

grass (prized for making baskets and small mats) were pulverized and converted into mush or mixed with acorn meal. It is also known that the biting seeds of the tansy mustard (Sisymbrium pinnatum) were frequently used in this way. It is probable that the seeds of many of the common grasses were so used—particularly when acorns were scarce.

Berries, too, were greatly prized, being used fresh or dried in various ways. For example, service berries (Amelanchier almifolia) were used fresh, tasting not unlike huckleberries, were dried whole or were pounded into masses or loaves of ten to fifteen pounds. When needed these would be broken into pieces and softened with water.

Manzanita Berries Highly Prized

One of the most highly prized berries was that of the manzanita (Arctostaphylos glauca). This berry is smooth skinned with an agreeable acid flavor. It was eaten raw or made into a cider for drinking or mixing with other food preparations.

Other common berries so used were the black raspberries (Rubus leucodermis-Dougl), the thimbleberries (Rubus parveflorus), elderberries (Sambucus racemosa L.), strawberries (Fragaria californica C & S.), currants (Ribes nevadense), gooseberries (Ribes roezli Regel), squaw berries (Rhus trilobata Nutt.) and wild cherries (Prunus emarginata).

One of Maggie's neighbors was preparing a sauce of squaw berries and water the day we visited there. Apparently these berries are considered a delicacy, for they had driven to El Portal to procure them.

I asked Maggie whether she ever used the coffee berry (Rhamnus californica), but she said: "No! He bird berry. Husband one time bring to cook but no eat. Too bitter."

Making the Poisonous Buckeye Palatable

One cannot but admire, however, the ingenuity and cunning with which seemingly inedible fruits and berries are made palatable. Thus the fruits of the buckeye (Aesculus Californicus), which, in the raw state are said to be poisonous, were placed in the conventional "baking pit" lined with hot stones and allowed to steam for several hours. They were then sliced and placed in running water for from two to five days, or mashed into a paste with water and leached, thus draining away the "noxious principle." The resulting mass was usually eaten cold.

Again, the stones of Prunus ilicifolia, gathered in late autumn, were cracked, the kernels removed, crushed and leached, then boiled as mush.

The berries of the California juniper—which are seldom thought of as edible—were greatly relished because of the sweet flavor of their mealy pulp. Their pulp was either eaten raw or dried, then ground into a meal and made into cakes to be baked on hot stones.

Few possibilities escaped the clever Indian—he finding food even among the Thallophytes in the from of truffles, mushrooms and various "fungi of the oaks." Bunnell says that nothing pleased the captive Tenaya more than a meal of fungi—after which he was most amiable.

Shelter

In summer, of course, the Indian needed no dwelling or shelter, but his winter hut, or "o-chum," was of a conical form—made with small poles and covered with the bark of the incense cedar (Libocedrus decurrens). Such dwellings were easily heated and formed a comfortable shelter against the storms of winter. "One of these huts," said Clark, "would hold a family of one-half dozen persons with all their household property, dogs included."

The Pictures

Left—Grinding Acorns. A picture from J. M. Hutching's "Heart of the Sierra." Acorns of the black oak formed the most important article of food for the Yosemites. The oily meats of the acorns were ground to meal in mortar holes worn in great slabs of granite. The presence of these mortar rocks today identifies the sites of ancient villages in Yosemite valley.

Center—A Yosemite Squaw. Women did the work. When Captain Boling captured a band of Yosemites in 1851 he attempted to place the burdens upon the backs of the marching braves. The squaws themselves fiercely resented this indignity brought upon their lords.

Right—L. H. Bunnell. Dr. Bunnell's record of his observations of Yosemite Indian villages found by the Mariposa Battalion in 1851 gives us our earliest and most dependable account of Yosemite Indian habits. His "Discovery of the Yosemite" is replete with choice material for the ethnologist and historian.

Another type of "house", though ceremonial rather than domestic, was the "sweat house." This was larger than the ordinary dwelling and was made by sticking a few poles ten or twelve feet long into the ground, their tops inclined toward each other around an area about twelve feet in diameter. The outside was then closely covered with long strips of cedar bark, then reeds and grass and the whole structure plastered with mud, making it water tight. An opening, which could readily be closed by a portable door, was left on the south side for an entrance. An opening was also left in the top as a "smoke escape." These houses were used by the men only to take "sweat baths" as a part of religious ceremonies, serving to remove bodily odors before embarking on hunts, and as curative measures, although for the latter purpose, varying resinous boughs and herbs were used for the fire.

Miscellaneous Uses

Among miscellaneous uses for plants one first thinks of the primitive Indian weapon—the bow and arrow. Of these Bunnell says, "Their bows were made from a species of yew peculiar to the West; from cedar and from a spicated evergreen tree, rare in southern California which, for want of scientific classification I gave the name "Nutmeg pine." It bears a nut resembling in general appearance that agreeable spice, while the covering or pulpy shell looks very much like mace. The nut is, however, strongly impregnated with resin. The leaves are long, hard and so sharp that the points will pierce the flesh like sharp steel. The wood is stronger and more elastic than either the yew, cedar or fir. It is susceptible of a fine polish. I made a discovery of a small cluster of this species of tree at the foot of the cascades in the canyon, two miles below Yosemite valley.

This location is undoubtedly along the El Portal road, where there are now good sized yew trees—and the species referred to by Gunnell as the "nutmeg pine" is Torreya Californica, whereas his "yew" is probably Taxus brevifolia.

The arrow shafts were of reeds, syringa (Philadelphus lewisii Pursh var e californicus Gray), rose shoots (Rosa californica) and the choicest, according to Bunnell, of Indian arrow wood or "Le Hamite," once very abundant in Indian canyon. Attempts have been made to find out what plant this Indian name refers to but none seem to know. I asked Maggie, but she could not tell me. She did say that for bows her father used the incense cedar.

Of course, all Indian threads were fibres of one sort or another, the two most popular ones being the bast of Indian hemp (Apocynum cannabium) and the milkweed (Asclepias speciosa). The hemp stems were rotted by soaking in water, after which the fibres could be easily removed. These were used for weaving into articles of clothing, for fish and carrying nets and for string and ropes. These fibres are remarkably strong and easily twisted into long threads by a novice.

The milkweed fibres, however, formed the true thread. As Bunnell states, "The thread used by the Indians I found was spun or twisted from the inner bark of a species of the Asclepias or milkweed by ingeniously suspending a stone to the fibre and whirling it with great rapidity."

WHAT IS A DIGGER INDIAN?

The term "Digger" applies to no particular tribe but has been used in referring to root-digging Indians in general.

Water Proof Baskets

Their baskets, said Bunnell, "were quite numerous and were of various patterns and for different uses. The large ones were made either of bark, roots of the tamarack or cedar, willow or tule. Those made for gathering and transporting food supplies were of large size and round form, with a sharp apex into which when inverted and placed upon the back everything centers." Still another kind made of a tough, wirey grass, closely woven and cemented, was

used for kettles for boiling food. The boiling was effected by hot stones being continually plunged into the liquid mass, until desired results were obtained.

It is interesting to know that Maggie still insists upon cooking her meal in such cooking baskets, using hot stones. I told her that one would think the water would leak out from the gruel, but she answered that as soon as the meal began to cook it coated the basket and served to hold the water.

Water baskets were also made of "wire-grass" and being somewhat porous evaporation is facilitated thus cooling the water.

Besides such baskets there were the weirs for catching fish, the winnowing trays and cradles—all made from approximately the same materials. The "warp" seems most generally to be of willow, (Salix lasiolepis) the long shoots of Pentstemon breviflorus or the split stems of the squaw bush (Rhus trilabata) and the "woof" of scraped willow (Maggie now uses an old piece of broken glass to scrape the glistening yellow strips) black stems and roots of the brake fern, (Pteris aquilina) or red strips of bark from the creek dogwood (Cornus pubescens). The designs of the baskets vary, of course, with the purpose, but as Maggie proudly pointed out, they are just as nice inside as outside and the "threads" are not colored, but used as found, apparently the materials for basketry were gathered in the springtime, when the willow shoots are long and supple and the dogwood shoot brilliantly red. The ferns, however, grow darker with age—so would be gathered in late fall. We asked Maggie to take us collecting with her but she grunted "No! Got lots in house."

Making Fish Traps

As stated above, wicker basket traps, made of long willow sprouts were often used in catching fish. At other times, crude spear hooks of bone with lines of the tough silken fibres of the milkweed were used. However, the most ingeneous likewise the laziest way of catching fish was to use the soap root bulb (Chlorogalum pomeridianum) These were used in summer when the water was low. The bulbs would be pounded into a pulp, mixed with soil and water and placed on rocks out in the stream. As it spread through the water the fish became stupefied and rose to the surface, where they were captured by the scoop baskets.

The outer fibrous coating of the soap root bulb was also used, being tied into crude brushes which were used to brush together the acorn meal as it was being pounded in the mortar.

Bedding and clothing, such as they were, were mainly of skins of deer, antelope or elk, bears, rabbits, hares, wildcats and foxes sewn or woven together with the milkweed twine. Queer animal head-dresses of skin, from which protruded twisting branches of manzanita, were used to disguise the hunter.

Although no longer true, the dead of the early Indian inhabitants of the valley were cremated, the ashes being gathered up, mixed with pine pitch and plastered on the face of the nearest woman relative, being left there until it naturally wore off. Pitch and rosin were also sometimes used to coat the water baskets, making them water-tight.

With regard to plants used medicinally, little is known. Bunnell, trying to learn the names of plants so used, was told that the secret was an heirloom and that if told, the curative powers of the plant would disappear. However, it is known that they used the parched kernels of the fruits of the California laurel (Umbellularia californica) to prevent indigestion. Also, according to Saunders, the Indians were accustomed to place a portion of a bay leaf in the nostrils as a headache remedy. Another remedy, Erythraea venusta, is known as wild quinine, and was used as a fever remedy, as also was the bark of Cornus nuttalli and Garrya elliptica (silk tassel bush). Again as above referred to, various aromatic herbs were burned in the sweathouse fire as curative measures. Beyond these few references, however, little could be found concerning the medicinal uses of plants.

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AFIELD WITH THE NATURE GUIDES

WHITE-THROATED SWIFT EATS PLANT BUGS

One thinks of the white-throated swift (Auronautes melanaleucus) as being a gleaner in the upper air. In Yosemite these birds are often to be seen from the highest points on the rim flying out over the valley so that in many instances they are really 3000 feet above the floor. In the hope of finding out what sort of insects might be captured in such places in mid-air, the stomach of a swift taken in Bridal Veil meadows was analyzed. The results were not what were expected, for Prof. E. O. Essig of the University of California, department of entomology, reported that the bugs contained therein were specimens of the bordered plant bug (Thyanta custator). This insect is not one that is likely to fly very high above the ground nor is it one that birds would be expected to eat in quantity for it belongs to the group of stink bugs, and is supposed to be offensive to birds. Yet in the stomach examined there must have been more than fifty of these bugs.

Preconceived ideas of the food of birds are so often misleading that we need more direct evidence as to the exact food taken by various species.—H. C. Bryant.

DUCK HAWKS AT CASCADES

On July 11, 1926, while on our way to Big Meadows on the old Coulterville road, the writer had the good fortune to see a pair of duck hawks above a giant cliff near the top of the rim where the Coulterville road leaves the valley below Cascades.

First we heard a loud calling immediately above us. It was recognizable at once as a young duck hawk. We looked up, but could see nothing at first. Soon one of the adults flew out from the wall and, soaring rapidly upward, disappeared over the rim to the west. It was soon followed by the other adult. The young continued to call in a voice similar to an adult, but, instead of stopping, it was a continuous performance. There were two young at least, possibly more.

We were unable to be sure of their exact location on the fall of the cliff, but the call seemed to come from a point fairly near the top.

Next year this pair will be watched more closely for no nests have been recorded for this section. —D. D. McLean and Egmont Rett.

OBSERVATION OF A BLACK SWIFT

As we were climbing up a small stream on our way to the top of Sentinel Rock Saturday, July 24, 1926, we reached a place some hundred feet down stream from a pretty little waterfall, and decided to rest awhile. As we sat there, we noticed three black swifts flying rapidly about. They flew out over the valley and returned several times, approaching the cliffs near us as they wheeled and turned back. Suddenly, as we were watching, one of the three flew directly into the dark recess just back of the little waterfall, and clung to the wet lichen covered rock, within six inches of the falling water.

We watched for some time, probably fifteen minutes, and during all this time the bird remained motionless. We approached carefully to get a better view, and examined the bird closely with field glasses from a distance of about fifty feet. It was clinging to the vertical side of the rock, facing our right, so that we had a view of its right side, although the head was kept facing us, and we could see the lighter coloration around the forehead and eyes. Upon our closer approach, it became frightened and flew. It did not return.

We wondered why a bird would choose to go to such a place. We thought of a nest, but careful examination revealed none, and besides the rock was so wet that it is doubtful if any bird would build there. It was not feeding, because it remained motionless, and we know that swifts take their food while in flight. It might possibly have come for a drink, but if so, why did it stay so long? The most reasonable explanation seems to be that the swift was simply resting and probably preferred the cool moist air in the spray of a waterfall to a hot dry cliff. The swift's feet are not adapted to walking, so whenever it alights it must be upon some vertical cliff or other vertical surface. Possibly the wet lichens offered a better foothold, or maybe the birds recognize the almost complete concealment given them, as their black plumage blends almost perfectly with the deep shadow of a rocky cavern.—G. C. Wood.

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.*