

CHARLES
KELLOGG
THE
NATURE SINGER
HIS BOOK

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OFFICE SCIENCE
1903

Mrs D. Ghiardelli
From C. J.
1929
Tuliciana.

Mrs D. Giardelli
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29
Lelicianna.

For Old Orpheum Goers---

KELLOGG, THE FEATHERLESS BIRD MAN,
IS WHITE HAired BUT STILL TRILLING

By J. CAMPBELL BRUCE
Chronicle Staff Writer

MORGAN HILL, Jan. 19—Ever Ever Land is a prune ranch with a handsome red-tiled house and a gorgeous view.

It looks like just a nice, quiet place to live. But day or night you may hear the honk of a Canadian snow goose, the harsh squawking of a South American macaw, the sweet warble of a West Indies solitaire or even the call of the Australian kiwi. Or, for that matter, the song of a thousand other birds, from titmouse to condor. Or you might even feel a sound, but not hear it.

Neighbors aren't the least bit startled. They know the sounds issue from one and the same throat—the strange throat of the fabulous Charles Kellogg.

ORPHEUM CIRCUIT

To the current crop of bobby soxers, nurtured on a diet of Sinatra and Van Johnson, speak of Kellogg and they'll tell you it's a crunchy breakfast cereal, good with sliced bananas or strawberries.

But to those who remember the heyday of the old Orpheum, Charles Kellogg will flash to mind as the celebrated Nature Singer, a headliner on Keith's bigtime vaudeville circuit. K-e-l-l-o-g-g was right up there in bright Broadway lights along with Nora Bayes, Eddie Foy and other four-a-day greats. And he dragged down \$3000 per as the featherless Bird Man.

Kellogg's unhuman larynx (it's a bird's syrinx, he insists, not a larynx) amassed him a fortune performing, offstage and on, such amazing feats as these:

Reproduced any bird trill or chirp he ever heard; ran up an incredible twelve and a half octaves into the realm of inaudibility; doused flames beyond locked doors or, via radio, thousands of miles distant; turned yellow carbon flames into blue Bunsen jets; started car motors without benefit of crank or self-starter.

QUIET LIFE

All this, of course, put Kellogg in the headlines as well as on the Nation's marquees. But for years now he's been missing from the news. Whatever became of him?

Well, weary of all the smoke and hubbub of cities, he retired

Metropolis
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San Francisco Chronicle
CCCCAA PAGE 13
MONDAY, JAN. 20, 1947

table oysters, and the home grown gourds that he fashions into lamps and ornaments.

For visitors, he will haul out his old stage apparatus, get a tall, steady flame going and put the squitch on it with his magic warble. The flame shrivels and dances excitedly, then crawls back into the jet.

Or for amusement he will strike up a conversation with strange birds. The other day a yellow-billed magpie stopped off at his place and, as magpies will, immediately began scolding all the creatures in sight.

STARTLED BIRD

Kellogg went out on the veranda and sat on his lali (a Fijian trough-like tom tom) and patiently took a sound tongue lashing himself. And then he lit into the bird. Called it everything in the magpie's lexicon. Mr. Magpie was understandably startled.

Knowing the reputation of magpies, we asked if they really talked coherently, sensibly.

Kellogg's eyes gleamed. "They talk beautifully, beautifully."

His remarkable vocal powers stood him in good stead when he located here. All about the hills were seared and arid. Coyotes even kept to the other side of the range, where there was water. But now his once parched acres are fertile, soaked by streams coaxed out of the earth by his divining rod voice.

Kellogg attributes his unique gift of bird gab to a "strange whim of nature." He believes he is the only man ever born with the throat of a bird. In addition to his larynx, which enables him to explain all this in good English without the necessity of having his tongue cut, he has a syrinx.

That's a series of half rings. A songbird, he says, has anywhere

logg reached 12½ octaves on the Helmholtz tuning fork. Almost knocked the fork for a loop.

"A human being like yourself," he said, "can't even think over three octaves."

U. C. EXPERIMENT

Kellogg once proved his amazing lights-out talents to a group of University of California scientists. They set up a gas flame in a laboratory on the campus. Kellogg pitched his voice into a microphone in a KGO studio here. The flame caught the pitch, shivered, went out.

Next morning Kellogg got a cablegram from a wealthy Chinese in Honolulu, who said he happened to be tuned in on KGO at the time. The Voice (sorry, Sinatra, C. K. has priority) extinguished three matches and a candle.

Right here and now, Kellogg would like to put in a request:

Anybody in the house got an old barrel mike? Maybe one kicking around in the attic? If not, can you make one. Kellogg would like a barrel mike to put flames out around the valley. These modern mikes just won't take his inaudible pitch.

Another thing he'd like to get across, a pet worry since he's become an authority on edible toadstools:

Never pick a mushroom. Put your fingers down and dig it up. That way you can see the venom bulb of the poisonous toadstools such as the Deadly Amanita, which is so potent a fly crawling under it will drop dead before it reaches the other side.

"I'd love to have you put that in," he said, "so people won't pick them. I hate to see people eat the Deadly Amanita."

A THIRD MESSAGE

Kellogg's ample paunch attests that he knows an edible toadstool and what to season it with. He is now 78 and his once great shock of brown hair is snow white and thinning, but he is as robust and energetic as a man half his age.

Kellogg had a third message to the world, this to talking bird lovers: Never cut a bird's tongue. Simply ruins the bird. Instead, cut its frenum.

Once during the interview a fire bell clanged in the room. Ding-ding, ding-ding-ding, ding.

Kellogg chuckled. "Don't be

Mrs D. Thirardelli
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Well, weary of all the smoke and hubbub of cities, he retired about 15 years ago to his Ever Land ("it's more optimistic than a Never Never Land") in the hills. Here he lives quietly among his bulky scrapbooks, his preserved blossoms of dandelions and vege-

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That's a series of half rings. A songbird, he says, has anywhere from 16 to 30. He was exceptionally endowed. He has 36. A bird's vocal vibrations hum around 14,000 per second. Kellogg's scale higher than that. Your own won't go above 4000, if that. Also, Kel-

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Once during the interview a fire bell clanged in the room. Ding-ding, ding-ding-ding, ding.

Kellogg chuckled. "Don't be alarmed," he said. "It's just the telephone. My secretary will answer it. I've never talked into a telephone in my life. Listened once. That's enough. Makes your voice sound queer."

Mrs D. Thirardelli
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PAUL C. SMITH, Editor

EDITORIAL PAGE

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SAN FRANCISCO CHRONICLE, MONDAY, JAN. 20, 1947

The Georgia Lesson

Disclosure of important ambiguity in the Georgia election laws might well engage the attention of California legislators, for our own Constitution does not seem to provide satisfactorily against the dilemma confronting Georgia.

The California Constitution seems explicit enough as to who should serve as Governor in the event of death of a successor before qualification, but the provision does not necessarily insure an ideal solution.

Section 2 of Article 5 says:

"The Governor shall be elected by the qualified electors . . . and shall hold office four years from and after the first Monday after the 1st of January subsequent to his election, and until his successor is elected and qualified."

This would seem clearly to mean—and the Supreme Court ruled it to mean in an analogous case of 1858 involving a State Controller—that should the Governor-elect die before being sworn in the incumbent should serve.

"The term," said the Court, "is fixed for four years certain, with a contingency extension. When this contingency happens, this extension is as much a part of the entire term as any portion of the four years."

But how long an extension? In the absence of any constitutional provision for special election in such circumstances, the "extended term" would apparently be another four years.

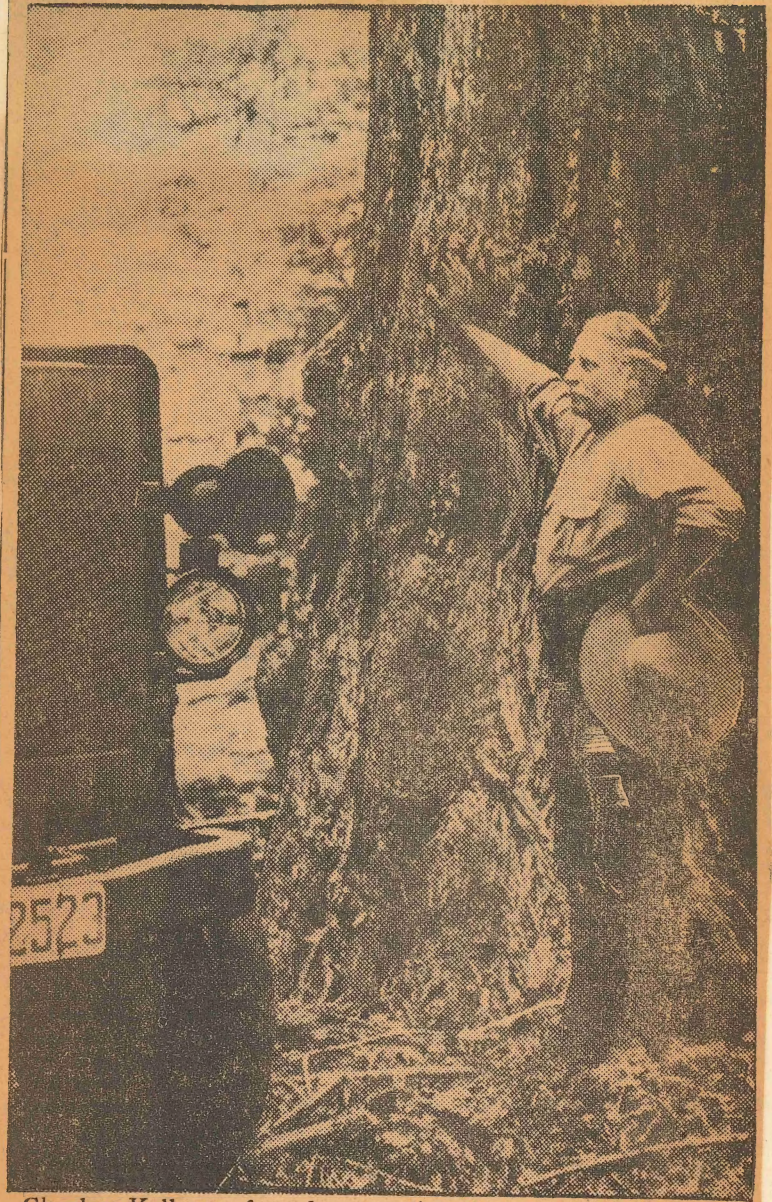
An extended four-year term for any Governor brought about not through the people's will but through the accident of death, and indeed contrary to the people's will (since the people in this the usual case would have

18th century, when Edmund Burke made his famous speech in Parliament on conciliation of the colonies. He delivered the death blow to the idea of mother countries exploiting peoples of European stock abroad. That had been the conscious aim of the Charleses and the early Georges in ruling their dominions in America, just as it had been the purpose of the Spanish.

Though, so to speak, the whites were freed, imperialism continued to exploit native stocks in Africa and in Asia, and there can be no denying it continues to this day. But during the 19th century and down through the 20th there has grown a powerful conscience among the home peoples which has created a resistance to the tougher phases of native exploitation. In the nature of things, it could not be expected that the reform would be rapid. Free peoples in Britain, Holland, France could not know at first hand, but only by the slow process of education, what acts were being done in their name thousands of miles overseas. Moreover, 19th century imperialism was economically profitable and that created a temptation to condone it. But two wars have hastened the development of moral conscience among average Britishers, Dutchmen, Frenchmen and Americans and sharpened their hearing when native peoples ask for independence. India, the Philippines, Indonesia are examples of the fact that if they ask loudly enough they get a substantial measure of it.

The 8000 French troops in the Ile de France, outward bound for Saigon, are not the 20th century answer to this 18th century heritage. They would better be supplanted by a cargo of 80 constitution writers, sent out to devise a beginning charter for Indo-China.

SINGS LIKE THE BIRDIES



Charles Kellogg, famed naturalist, heard over NBC on "Dobbsie's" happy time hour, does not whistle, but actually sings all of his bird songs.

CHARLES KELLOGG
THE
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HIS BOOK

FIRST ONE THOUSAND VOLUMES NUMBERED

THE NUMBER OF THIS BOOK IS

722

Charles Kellogg.



CHARLES KELLOGG

THE
NATURE SINGER
HIS BOOK

OVER ONE HUNDRED ILLUSTRATIONS
FROM PHOTOGRAPHS BY THE AUTHOR



TILE: "THE FOREST SINGS"
DEDICATED TO THE AUTHOR BY DR. HENRY C. MERCER

MORGAN HILL : CALIFORNIA
PACIFIC SCIENCE PRESS

1929

TO
SA'DI
THE BELOVED

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INTRODUCTION

Some years ago I had the good fortune to see Charles Kellogg for the first time at one of the leading vaudeville theatres of the east. I was told that he was an extraordinary man, *sui generis*, indeed, and was bringing to that glittering world of tinselled and painted smartness an absolutely new thrill: a man transporting a part and parcel of his own far-western life into our metropolitan midst, and who had the temerity to be just himself; to sing the bird-songs of the Sierra and give us of the fullness of a rich life spent in remoter regions of whose charms and allurements we had only read in books—and all without the standardized theatrical effects so despised and yet always demanded by the seasoned playgoer.

When the curtain went up on a superb California scene, with its witchery of varied colorings, the noise of falling waters and soft medley of forest birds, I saw the audience straighten up and take a sudden deep breath as if transported to some redwood region high and remote from human habitation, and where the sound of applause would be out of harmony. Then the bird-man appeared, wending his way through the woodland enchantments with the firm strong stride of the mountaineer, head bowed in thought and apparently as oblivious of the great crowd as on the lonely trails of the high Sierra where for months on months only the wild creatures heard his step and knew his voice. Reaching the footlights, he unbound and laid aside his pack with practiced care, and faced the vast auditorium as if for the first time realizing that he was not alone. Those seated before him seemed to be wondering if he would now stand the supreme test: make good the promise of such an auspicious opening. Then he began to tell his story.

With his simple material in hand and the melody of his matchless bird songs, nature's mark of her own child, his words had the very spirit of a woods prophet. There was something in that physically fit, mentally keen and spiritually responsive personality that proclaimed him every inch a master in any emergency, fearless in the

face of any danger, a poet, artist and dreamer, yet in every vital sinew a man of action. I watched the audience with almost as much interest, for he seemed at once to have them under a spell—rapt, tense, watching every movement, fearful of losing a single syllable. The secrets of bird-lore, the mysteries of woodcraft, one surprise followed another till the allotted time was up, with his hearers still hungry for more. It was as if during that half-hour the man of nature had only touched on his theme—as if he could go on and on for hours in that same compelling way. Then amid a storm of applause the audience settled back with a look on every face that seemed to say, "There's a man I should be proud to know—whom I should be honored to make my friend!"

And that is just what has been my good fortune from that hour through all these intervening years: to know Charles Kellogg not only as the artist and able expositor of wild life, but in the charm of his own California home and among the things in nature that are his very existence; and with every year of ripening friendship discover new qualities of mind and heart and character which inspire admiration and bind the deepest ties. For I realize that Charles Kellogg represents a type of genius of which are perhaps two or three in a generation—"dedicated spirits" untiring in their search for what is beautiful and true, rich repositories of experience like his late friends, the two Saints John of the woodland-world, Muir and Burroughs, yet wearing their weight of learning as lightly as mountain-flowers wear their colors and their perfume.

That Charles Kellogg has written a book, somewhat in the manner of autobiographical episodes, seems the most natural thing in the world—indeed, that he has not done so long ago is a matter of surprise to his casual friends. But such is the innate modesty of the man who chooses to impart his vital message by personal contact rather than through the written legend. But at last we have in his own book something of his rare personality and character.

C. E. BARNES.

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THE OLD SPANISH STORE



HENRY KELLOGG

RICHARD THOMPSON

FOREWORD

THE EVER EVER LAND

I WAS born in the high Sierra of California under the noble Spanish Peak. Meadow Valley was my playground, with Spanish Creek, like a silver thread running through it, and the primeval forests encircling it. Spanish Ranch, my home was not far from where Oregon, California and Nevada come together and nearly a hundred miles from a railway.

In the fifties, Father and his partner, Dick Thomson, discovered the Gopher Hill Gravel Mine. Excitement was intense. It is reported that two million dollars in nuggets were taken from the diggings. Father and his partner had their share, which started them in their large merchandising enterprise, lasting more than half a century. They also filled all the offices of a pioneer settlement—Wells Fargo agents, postmaster, and Justice of the Peace.

At Spanish Ranch there were no doctors, missionaries, churches, telephone, telegraph,

schools, saloons, poorhouse, jail or gamblers: no police, for there was no disorder. But there were birds, grizzly bears, deer, wolves, foxes, skunks, badgers, mountain lions, wild cats, snakes, and all the smaller wood folk. There was no time for sport, so called. The guns were the old-fashioned muzzle loaders and used only in hunting for food.

They tell me there were no white women there except my mother, and I lost her in infancy. I was given over to a faithful Indian squaw; but nearest and dearest of companions to me was the wise, lovable old Chinaman, Moon—steward, cook, and friend to all about the ranch.

In this man's frontier world my childhood was, not wild, but free. I was a lonely child, but not unhappy for I spent my days in the meadows and forests and was always preoccupied with birds and insects, listening to them and talking to them in their own language. At night I heard the coyotes howling and yipping, the owls hooting, the scream of a mountain lion, making the stillness vibrant with night life.

It was not until I was a grown lad that I learned the ability to do so was unusual and that others could not do as I did. Father was too preoccupied with his many mining and business affairs to pay much attention to me, but he knew

I was safe among the miners who were always coming and going, the Digger Indians and the Chinamen. To this day I thrill at the sight of an Indian or a Chinaman.

They taught me to fear no creature, and I seemed to have been born with the sense of absolute direction. I wandered alone in the timber among the woods creatures, and no matter how long I was gone, no one, myself least of all, feared I was lost.

They taught me, too, the habit of minding my own business, letting the other fellow alone—bird, bear, snake, Indian and other humans. This training has been of incalculable good to me throughout my life, carrying me safely through the wilds and forests as well as the big cities of the world. I have never carried a gun or compass.

My earliest recollection is sitting with the Indians about their campfires or watching the Chinamen boil their rice between the stones. There it was I first began to whisper bird songs, singing always through the nostrils as I had seen the birds do. (Watch your canary, he does the same.) Much later I found that I could open the lips and chirp, and sing full-throatedly. I felt perfectly free singing to the Indians and Chinamen, but the moment a white man ap-

peared I would instantly stop. It was not until I was sixteen or seventeen that I could overcome my shyness and consent to sing in public. From then on I was called "The Bird Man."

It was supposed that the study of birds was my life work, whereas I have paid no attention to the scientific study of birds. Through a strange whim of Nature, my throat, below the vocal chords, has the same physical structure as that of the bird, so that my songs are not imitations but genuinely my own, with the range and quality of the birds'. Listening to them and answering their calls and songs has been my delight; but I also love all creatures, not excluding the lowly and mistrusted snake.

When I was six or seven, a new life began for me. It was decided to take me down country to attend school. Father was born in Cazenovia, near Syracuse, New York, and went West earlier than the "forty-niners." In '47 he sailed to Panama, crossed the Isthmus over the trail, sailed north, and through the Golden Gate. From San Francisco he went directly to the mines in the high Sierra. Naturally his thought turned to his early life, so I was sent to my aunt, his sister in Syracuse, to be "educated."

It is possible that I looked into books incidentally; however, nothing I learned in them re-

mained with me, but I came to know every inch of the woods and swamps for many miles around.

It was the gift of bird singing that brought me out into the world when I was about sixteen. My public work for thirty-five years has been telling the stories of my adventures and experiences in many lands, and singing bird songs—for twenty years on the lecture platform and for the past fifteen on the stage. Most of each year has been spent in the woods and forests, with three or four months in the lecture halls and theatres.

This past year I have remained at home for the purpose of setting down a few of my reminiscences and adventures. These have been told many times in many environments—around the campfires of hunters and trappers, Indians and primitive peoples, at the firesides in the homes, and in far off lighthouses. And always the question comes—"Have you written a book?"

I.

SPANISH RANCH DAYS



SPANISH RANCH, MY BIRTHPLACE



SPANISH CREEK LIKE A SILVER THREAD
RUNNING THROUGH MEADOW VALLEY



IN THE MEADOW AT SPANISH RANCH



UNDER THE SHADOW OF SPANISH PEAK

DUTCH SNYDER, THE BEAR HUNTER

AT certain seasons the snow in the high Sierra begins to fall in early October, coming in large flakes floating leisurely down in a windless atmosphere, piling up and up until it is sometimes ten or twelve feet deep. There it lies for weeks, a fluffy, flaky covering; one can walk right through it with feet on the ground and several feet of snow overhead. The marvel to me was that we could breathe under this snow as naturally as in the open air. It topped the buildings so that we were completely buried under it.

In the early days as a boy, I remember father placing ropes from one outbuilding to another to guide us; holding on to them, they slipped

through your hands as you walked under the snow, guiding you from one building to another. But if it was absolutely necessary to get through the forest to some not too distant place, this was the way we did it: climb a sapling and get your bearing, sight a tree to be climbed, drop down under the snow and feel your way until you bumped into what seemed to be the right tree, climb it, and sight another. In this very slow and laborious way you got safely to your destination.

There was one serious drawback to this method of travel; at any moment you might drop into a deep prospect hole. However, there was the unwritten law, which was usually complied with, for the miners to build a fence around their prospect holes, so that in the winter season the unlucky traveler might not drop into them. The snow would lie for weeks in this manner until the wind started to blow. Then it drifted into arroyas and canyons, until in certain places it would fill the canyon completely, sometimes seventy-five and a hundred feet deep.

Snow coming in this way would be a complete barrier to the stage drivers. So the mail had to be carried on the backs of men who traveled with what we called snowshoes, usually called out in the world, skiis. These were very differ-

ent from the usual Norwegian or Eastern ski. The runner of a high Sierra snowshoe was made of split spruce usually four inches wide, ten to eighteen feet long, turned up about two feet on the end like a sled runner. The foot fitted into a stirrup-like shoe with a cleat underneath the heel of the shoe; this cleat was essential to keep the foot from slipping. Unlike the Norwegian ski, the foot is not fastened in. In ascending a mountain, the snowshoer would draw over the back of the shoe a moccasin of bed ticking, a sort of close fitting sleeve, completely covering the rear half of the shoe, causing the ski to stick to the snow. This enabled him to travel straight up the mountainside. Of course, after reaching the top he would remove the moccasin and easily coast down upon bare snowshoes.

It was traveling in this manner in the forest one winter that I came upon a man whom we called Dutch Snyder, a tall, raw-boned old prospector. He was seated in the snow on a projecting ledge halfway down a narrow ravine, and in his lap was a bag of pebbles the size of marbles. At short intervals he cast one pebble at a time over the edge of the ledge, directing each pebble at a certain spot which was the opening of a small cave. Leisurely he kept throwing pebble after pebble, directing them exactly at the same

spot. He made a quick sign to me to be quiet, so I slipped off my skis and sat down on them beside him.

After what seemed a long time, to my astonishment, the head of a great grizzly bear poked out of the opening, blinking his eyes. He had been lying dormant, perhaps weeks in the cave, but he could not stand this perpetual dropping, dropping, and came out to see what it was. Snyder had his rifle by his side, and the moment the head was well out he fired. But this was only the beginning, for what looked like a great cloud of snow and fur rushed out of the cave, and the bear rolled down the ravine like a thousand pound rubber ball. He bounced up again and tore away up the steep side of the ravine, Snyder popping his rifle after him. This was the last I saw of them, but Snyder told me the sequel. We had often wondered how it was Snyder got his bears, and this was his strange way of hunting them.

He knew bears are curious, and they could not stand the perpetual dropping, dropping of the pebbles without sooner or later coming out to see what it was. He knew, too, that a grizzly with his great bulk must climb straight up or straight down a steep ascent. If he tries to go sidewise he finds it all but impossible to make

any speed because of the great breadth of his chest and his short legs. So Snyder had no fear in chasing him up and down the steep sides of the Sierra forests, for if the bear charged after him he could dodge him by zigzagging up or down. From time to time he would lodge a bullet in the great body, but the bear would keep right on. He told us that once he had put as many as eighteen bullets into a grizzly before he got him. Often Snyder would lose the track toward night; then he would lie down under the blanket of snow, keeping warm and comfortable. Finding the track again without much difficulty, he would take up the trail next day. Meanwhile, the bear would gradually be losing strength from loss of blood. Finally Snyder would catch up with him, and the vital shot would finish this peculiar hunt.

SNYDER AND HIS DOG

ONE season I decided to see if I could bring into salable shape one of Father's numerous mining properties in Plumas County. Butterfly Mine in the Butterfly Valley seemed a likely undertaking, but it necessitated considerable planning. Father and his partner, Dick Thomson, were the general merchants for many miles around, and Father had been supplying prospectors and mining companies during a long

lifetime. The prospectors, if they failed, had nothing to leave but their I. O. U's. However, no prospector ever applied to Father without getting his grub stake (pans, picks, food). After his death we found many thousands owing to him from these poor fellows. The mining companies, too, would often go under, leaving large debts, and Father would take over the abandoned mines and their machinery and salvage what he could out of them.

On one of these properties at 22 Mile Bar there was a quartz mill. The shaft in it was just what I needed at Butterfly. The mill was located at the bottom of a very steep canyon, and the shaft had been packed in from Spanish Ranch, a distance of twenty-two miles, on the shoulders of a dozen Chinamen several years before. The shaft was eighteen feet long and three inches in diameter, weighing several hundred pounds.

I had tried for days to secure a crew of Chinamen who would agree to pack it out again, but it was a different matter to pack it up the rough, steep trail. Finally I figured out a way I thought it could be done with one man. I determined to "snake" it out with horses hitched tandem to a lizard. A lizard is a crotch-shaped sled made of logs, something in the shape of a Y or great sling shot.

All the old-timers hearing what I intended to do, said it was impossible. They said the moment the horses started to pull, the lizard, with the upper end of the shaft on it, would lift, and in rounding the corners of the zigzag trail up out of the canyon, the shaft would slide over the bank, dragging the horses with it.

However, I felt sure it could be done by taking plenty of time to it. First, I chained the shaft to the cross piece of the lizard and straddled it. Holding a rope tied to the shaft, where it was chained to the cross piece at the head, I was able to control the swinging end. Then I had a man lead the two horses tandem. In this manner, stopping only to allow the horses to blow, I guided the shaft step by step, up the winding contours of the steep trail all day, straddling the shaft the whole twenty-two miles without a mishap. But for several days afterwards I was in my bunk, nursing my much-abused, cramped legs.

Experience had taught Father that a small, rich quartz ledge was apt to be pockety, and would invariably pinch out; so I decided on Butterfly, which displayed a large, but low grade quartz ledge. It had a shaft a hundred feet deep, with drifts and stopes at the bottom, so it could be worked all winter.

In the late summer I established a camp on the flat in a grove of magnificent pines. A long winter was before me, so I got all my stuff in little by little, machinery and provisions—all but the hay for my horse; for, should it chance to be an open winter, I would need a saddle horse.

It was late October when we left Quincy with the last load, a four-horse load of hay, and it began to snow—the suspicious kind of flakes that bespeak the “snowing in” time which might come sooner or later. However, this was rather early in the season so we ventured in with the load. Butterfly was located nine miles from Quincy, and the driver was just able to make it, and get his empty wagon and team back to Quincy.

From then on, for two weeks, the snow floated slowly down in large flakes, so large and feathery, and the air so still, they fluttered gently down like leaves on a quiet autumn day. It did not pack, but piled up and up until it was a light, fluffy, downy covering, often twelve and fourteen feet deep, completely overtopping and burying the buildings. Down it came day after day, never stopping, soundless, piling up so quietly, and there we were buried under this dry, flaky mass of snow several feet over our heads, far more contented and comfortable than we would

have been on a ship in a dense fog. The daylight that came through was like a quiet twilight and the air had the sweet smell of new fallen snow. It must be understood that this snow is so light and soft and flaky, a mouse or even a bear can walk about under it without resistance.

Of course, we could not see through it, and in order to get from one log cabin to another, it was necessary to tie a rope from place to place. Whenever we wished to get from one building to another, we would slip through the snow and follow the line, our hands sliding over the ropes. With this soft, light mass of feathery snow several feet over our heads, strange to say, we kept perfectly warm and dry, and had not the slightest difficulty in breathing. It is known that deer, bear and other woods creatures can feed quite freely on the grass and bushes underneath this snow.

We went around daily, did the chores, and fed the horse. The poor fellow looked so lonely and dejected we felt sure he was suffering from homesickness. After weeks of this condition, however, we would become uneasy and pray for a warm day and a freeze. Should there be a great thaw and heavy freeze, a crust would form and we could get on top of it and run anywhere with the greatest speed and safety. This crust has a

peculiar surface, not smooth and glassy like ice, but gritty, almost pebbly, and one can even run on it without slipping.

It was after such a thaw and freeze, at the end of three months, that our poor homesick horse saw his chance for freedom. When I went out to the shed that morning there was no horse. I soon saw his tracks on the crust leading across the trail, which meant that he had made for home. Fearing that before he could reach there, the sun might come out and thin the crust, causing him to flounder, I knew there should be no time lost before taking out after him. Rushing back to the cabin and securing my snowshoes in case of need, I struck out on a run along the trail route for Quincy. This meant climbing over two mountain ridges. As I reached the top of the first ridge, following his tracks, and was about to go over the next into the gulch below, I heard a dog barking—it was Snyder's dog. This gave me great relief, for I had been worrying about Snyder.

Passing Snyder's cabin that fall, I found he was not at all well, so urged him to give up his diggings, go into Quincy, and spend the winter with the Odd Fellows. He refused to accept my advice, saying he had abundance of provisions all stacked in the cabin, his dog Tobey for com-

pany, and a good prospect in his diggings at the brook running just below. I begged him not to attempt any "scratching" (digging for gold), for I saw his condition was too feeble for such vigorous work. Although he had said he would take it easy, I was still troubled about him. So when I heard his dog barking, that told me Snyder must be all right, and sure enough, when I reached his cabin I found him there. Although he was a tough, raw-boned, old chap, he seemed to me to be in bad shape—weak and very thin. I begged him to allow me to notify the Odd Fellows in town for I knew they would assist in getting him into the village. He protested so cheerfully, and was so decided he could get along all right, that I continued on over to Quincy. There I secured my three months' delayed mail and hurried on to see if the horse had arrived at the Finlayson ranch where he belonged. There he was, and they told me he had shown his joy at getting home almost like a dog.

Having Snyder in mind, I hastened back as quickly as possible, but by this time it was mid-afternoon and the crust had begun to break, so I had to resort to my snowshoes. When I reached the opposite mountain ridge and was about to descend to Snyder's cabin, the dog did not bark. I immediately felt something serious must have

happened, for this watchful friend had never allowed anyone to come into the canyon without announcing it by loud barking. I made the best speed possible, and fortunately it was all down hill, and in a few minutes I was at the cabin. There was no Tobey, no Snyder; but I saw trapper tracks, made by bear paw snowshoes, leading toward his diggings. Sliding quickly down to the opening, I saw the dog seated by Snyder, fallen forward with his gold pan in his hand, his head and shoulders in a little pool of water—dead.

The dog permitted me to lift the body out of the pool, but that was as much as I could do alone, so I went back to the cabin, got a blanket, returned to the body and covered it, Tobey sitting mournfully by. Then I hastened to Quincy and gave the alarm to the Odd Fellows. They immediately formed a party and followed me back to the gulch. They placed poor Snyder's body on the sled. Tobey followed as far as the cabin, but with all our entreaties, he would not leave, even to follow his master's body. I had some lunch with me, which I offered him, but he would not touch it. He went onto the little front porch where Snyder had built a kennel for him, lay down with part of his body in the kennel, and put his nose on his paws, with the strangest far-

away expression on his face. He did not seem to see any of us, nor would he respond to the kindly treatment offered.

As it was getting late I knew I must hurry to my own camp, but promised the men that in the morning I would return with fresh meat, and try to make Tobey follow me. This I did for three days, but each time he refused to move, and the food remained untouched.

At the end of the third day I once more tramped the three miles, and slid down into the gulch. I felt no concern at not hearing anything, because, from the time of Snyder's death, Tobey had made no sound. Approaching the cabin I saw he was in the same position, his head on his paws, but his eyes were closed. I put my hand on him—he was cold. Lifting the body on a sled I hauled it to Quincy, and we buried him beside his beloved master.

FATHER AND THE CHINESE BURIAL CEREMONY

WHEN Father and his partner, Dick Thomson, first came down off the mountain into Meadow Valley, they found that a few Spaniards had preceded them. And when they began casting about for their camp spot on the edge of the mountain stream, they decided they would call their home or camp, Spanish Ranch. They located on the edge of the creek and called it Spanish Creek. The maps of today have retained these names.

In nearly all the mining districts, miners of all sorts, Spaniards, Mexicans, and white men followed the streams and at the edges set up their rockers. With pick, shovel, pan and rocker they worked out the free gold that was held in the

gravel. They worked restlessly from spot to spot, soon leaving their seemingly worked out diggings—always moving, moving on, up or down stream, lured by the hope of more likely and richer gravel beds.

Following these came the Chinamen, who would begin where the miners left off. They re-worked in a patient, efficient and painstaking way the abandoned diggings, and they made not only a good living, but could secure the "twenty-two fine gold" which the others had not the skill to catch. They would even profitably work the tailings from the abandoned *arrastrés* of the Spaniards and Mexicans.

Father's business gradually developed into general merchandising, and the Chinamen from all over the country would bring their gold dust to Spanish Ranch in order to ship it to China. Father and his partner were also the agents for the Wells Fargo Express Company. The gold that the Chinamen so painstakingly accumulated was not melted into the usual bricks that were sent down country to the mint at San Francisco; they insisted on sending the dust just as it was back to China.

Coming in contact with these silent, strange people, father soon learned to greatly admire their good qualities, their honesty, faithfulness

and industry; he respected their feelings and customs and won their confidence and affection. When a Chinaman died they would come to Father and ask him if he would attend to the burial. No Chinaman, if he could get out of it, would bury his own. They would cast about until they found someone of another race who would undertake the job. The Chinese, of course, were looked down upon as inferiors. Those who for a price would undertake what seemed to them a disagreeable task, in a shiftless way got the body under the ground as quickly as possible, and desecrated the Chinaman's feelings in all sorts of careless ways.

It was every Chinaman's wish that after the body had been buried, the shovel that dug the grave should be broken so that it could never be used again. They found in early association with Father that they could fully trust him, and for forty or more years he attended to all the burials. And he not only attended to the burials, but he provided the ground they used for this purpose. When a body was to be buried he would go to the warehouse and get a brand new shovel, take it to the man he had employed to dig the grave, then send word to the Chinaman they were ready.

They would place the pineboard coffin in a

cart; two Chinamen would sit on the rear holding long narrow strips of colored paper, and as the body was driven toward the burial ground the two Chinamen, with feverish haste, would tear off and scatter little bits of these strips, leaving an unbroken line of colored papers from their home to the burial ground. We found out they did this that the spirits who were supposed to follow the body would stop and pick up the bits, and so be unable to catch up until the body was safely underground.

The grave was quickly dug and the box lowered, more paper thrown upon it, also all the Chinaman's belongings, clothing, blankets, tools, and trinkets. They would immediately leave, trusting Father to complete the ceremony, which was to fill the grave and construct a picket fence about eight to ten feet square and four feet high around it. He would then place a row of candles all along the inner part of the fence, scatter a bunch of cigarettes, and one of punk (incense stick), and on the grave put a whole chicken or small roast pig, according to the standing of the departed Chinaman. Then he would take the shovel back to his anvil at the blacksmith's shop and smash the shovel blade beyond repair, return to the grave, and place it inside the fence.

Seven years afterward the Chinaman would

come to Father and say, "Seven Companies send bones back to China. Mr. Killimhog, (their pronunciation of Kellogg) send bones back?" This meant that Father was to dig up the body, box the bones and ship by Wells Fargo to the designated place in China; and it also meant a new shovel. This, Father would procure, see that the body was dug up, that every bone was carefully gathered, placed in the box and shipped. And he would religiously see to it that the shovel that had dug up the body was smashed on the anvil and returned to the empty grave, just as at the burial ceremony seven years before.

After an absence of over thirty years, in the summer of 1926 while visiting my old home and birthplace, I thought of Father's love for the Chinamen, and wondered if there would be any evidence left of the old Chinese burial ground. There were no more Chinamen living at Spanish Ranch, but nevertheless I hunted out the spot. There, well hidden behind a gentle rise on the hillside, surrounded by second growth pines, I found it—untouched, just as I remembered it, except that the fences had rotted and disappeared—a circular place, curiously free from all bushes or undergrowth, thirty-six depressions covered with dried grass and pine needles, and in each empty grave a broken shovel, just as Father had placed them.



AGAIN ON THE OLD STORE PORCH AFTER THIRTY-SIX YEARS
OF WANDERING

HORSE SNOWSHOES

I T has always been a matter of pride with me that Father was the first one to conceive the idea that horses could be made to use snowshoes. He felt sure that by beginning with very young colts it might be possible to train them in the use of snowshoes, provided the shoe was scientifically made. He was a master craftsman in all directions and it was almost incredible the things he did with only his blacksmith's anvil. He even made his own fine dental tools, for he added to all his numerous duties and occupations, simple dental work for the miners.

A hundred miles from the nearest railway, the snow played an important part in our lives, and ways and means of getting in and out of the

mountains in winter were uppermost in our thoughts. The burros and mules could not get across the trails deep in snow, so Father thought out and made the first set of horse snowshoes ever used.

In the first place he shod the colts with a very heavy shoe, the toe and heel caulks an inch long. The snowshoe itself would necessitate four caulks, so he decided to make them 16 inches square, out of heavy steel plate with holes to receive these long toe and heel caulks. At each side he had iron straps that could be brought across the top of the hoof and securely bolted together. In the beginning he was always careful to bind the edges with a piece of rubber hosing.

At first Father would put the front shoe on the colt and lead him out into the snow. Of course, there would be clumsy thrashing and occasional wounds, but it required only a short time for the colt to realize that by throwing his feet out and in, he could walk without injury. Then with great patience Father would coax him to let him clamp the shoes on the rear, and again there would be plunging and lunging. But it was surprising in how short a time the creature would learn the trick of walking safely upon these clumsy things. However, Father told me that

in all his experience he was never able to train an old horse to perform this feat.

In after years it became the regular habit of stage drivers, who had the contract of delivering the mail from Oroville to Quincy, to outfit their horses with these metal snowshoes. It was a boon when they were perfected, for it relieved the mail carriers of the hard and often dangerous work of carrying the mail over the mountains and through the forests on their customary twenty-two foot snowshoes. It was curious to see the strange tracks left by the stage driver with his snowshoe shod team.

One very interesting fact showed the instinct of self-preservation in the horse. In the deep snow, should a horse cast a shoe, it was all but impossible to get him back on his feet, and the driver would be obliged to take out his gun and dispatch him. Nearly all the horses, however, would become wise if a shoe should even loosen, and would stop and refuse to go on until the driver had screwed up the shoe firmly again on his feet. It almost seemed these wise creatures realized it meant death should they cast a shoe; for it must be remembered that in some places, like crossing a canyon, the snow would be fifty to a hundred feet deep. To this day you may see the shakes nailed high up, sometimes as high as

seventy-five feet, on the side of a tree that were placed there by a stage driver standing on the snow, marking his way through the forest.

It became necessary one season for me to get down country. The Oroville route, fifty-six miles, was impassable as the snow had not packed sufficiently for the horses with their steel snowshoes to get on top. There was a much longer route one hundred and twenty miles further via Quincy, Beckwith and Reno, Nevada. This route might be passable and I made the attempt with Jim Brooks, a six foot three mountaineer, a young giant, who had for several winter seasons made the stage trip successfully the long way.

The morning we left Quincy the crust held perfectly and the going was fine. A beautiful sun came out and the crystal covered world about us was like a fairyland, and I became enthusiastic over the grandeur. But Jim kept looking up at the sun. There was no one else aboard and I tried to get Jim into conversation, but he was not in a talkative mood.

About ten o'clock the crust cracked under the snowshoes of first one horse and then another. I had given up talking to Jim and was studying his face, for I knew this "beautiful sun" was getting in some dangerous work. Suddenly, at about noon, the high pole horse crashed through

the crust. The leaders, for it was a four horse stage, started to lunge; Jim in a perfectly cool, quiet voice steadied them, and they all finally stood still. I saw that the off pole horse was holding the other animal from disappearing entirely, but he remained perfectly still, although trembling in every nerve. I was excited and started to climb down and help, remembering the stories I had heard about being obliged to shoot the horses should they break through. One look at Jim was enough for me to understand that I must sit still.

Slowly Jim wound his reins over a peg on the dash and sat back comfortably in the seat, reached into his pocket, got out his jack-knife, and from another pocket pulled out a plug of tobacco and began putting a large handful of it into his palm; then he put the knife and plug away. Apparently serene and untroubled, he began rubbing the tobacco "free" into the palms of his hands. Leisurely he filled his pipe and put it into his mouth. Meanwhile the down horse lay there trembling, and the others had calmed down. From still another pocket Jim took out a slab of old-fashioned sulphur matches and peeled off one, lit his pipe, and sat back smoking quietly, for I should think a full minute; but to me then, it seemed half an hour. It was as though

he had cast a spell over me as well as the horses, for I sat perfectly still watching him.

When he had had his smoke, a smile came over his face—he took a long breath and his huge frame seemed actually to expand. He dropped down on one knee next the dash, leaned way over into the snow pit, “Now, Baldy, up you come,” he said between his shut teeth, then with *just one mighty pull he lifted the horse bodily out and onto the edge of the crust.* He stood there trembling, but safe on all fours.

This was the only time I ever knew of a snow shoe shod horse being saved from the fatal shot after breaking through.

A NOVEL WEDDING

FROM childhood a red haired person has always fascinated me and when I heard that the young lady whose lovely red hair I so admired was to be married, I begged Father to take me to the wedding. I was six years old. Had I received an invitation? Well, that made no difference to me. Had not Father mined the gold and made the wedding ring with his own hands, and had he not been promised as a reward the first kiss from the bride, and wasn't she red haired? And I had never up to this age witnessed a marriage ceremony; but there was much talk about this one, for the bride was popular not only with my youthful self, but with the community as well.

The bride's home was a mountain cabin, but

unlike most California mountain homes, it had two stories; even at that it was not a very big house. As all the guests could not see the actual ceremony being performed, she happily thought out a novel scheme whereby all could hear the ceremony and actually take part in it.

When everyone had arrived we were crowded into the front hall, parlor, dining room, kitchen, upper stairway, and the three upstairs bedrooms. Yards and yards of pink ribbon had been provided. When the time came, beginning with the preacher and the bride and groom, the endless ribbon was passed from hand to hand through every room until all the company had hold of it. In this manner all participated in the ceremony.

As my little hand grasped the ribbon I can remember to this day the thrill I had, for I was fortunate in being half way up the front stair and could peek through the banister and see not only the red hair of my favorite, but her pink cheeks as well.



DEMONSTRATING THE DIGGER INDIAN TIES TO THE BOY
SCOUTS OF DENVER, COLORADO

THE DIGGER INDIAN DEATH TIE

OUR Digger Indians of the high Sierra in Plumas County were just like the Digger Indians throughout all California, a lazy, happy-go-lucky lot. But with the necessity of providing food for the winter, they were capable of good hard work. With much skill they would cut down a large sugar pine tree when the cones were ready for the harvest. If they waited for the cones to drop, it would be too late, as the nuts would have been scattered. The nuts inside the leaves of the giant cone formed part of their winter's food. After felling the tree, they would gather the mass of cones into a pile and partly burn them until the leaves of the cone cracked open and released the nuts. They were then

easily gathered and carefully stored for the winter. But the meat for their jerky was trapped in a novel and simple way.

A spot in the forest was chosen where they knew the deer frequently passed. The Digger would take a ball of twine, often over a thousand feet long, and tying one end to a tree or bush waist-high—about two and a half feet from the ground—he would stretch the string from tree to tree, taking a hitch around a tree as he passed to hold it in place. This he would continue for hundreds of feet through certain places in the forest. Then there were two methods of procedure; one was to dig a pitfall at either end of the string, covering the pit with brush; the other was for two Indians with their guns to sit and wait, one at either end. As the deer came along he would see the string, and like most woods creatures, his curiosity would be aroused. With his eyes glued to the string, he would follow either way, and at the end, trip into the pit, or fall to the Indian's bullet.

As a rule the Diggers around my home at Spanish Ranch were a peaceful lot, but occasionally they would have feuds with neighboring tribes. They were always friendly to me when I was a little boy wandering freely among them, and I learned my first lessons in woodcraft from them.

I was a sturdy youngster and from the time I could toddle I was at my father's heels. There was always something interesting and exciting doing wherever he went. I followed him around the ranch, from warehouse and store to the big corral or blacksmith shop, and as I grew older and could walk a little faster, I went out on the trails with him.

One adventure, when I was about five years old, made such a sorrowful and terrible impression on me, it was a long time before I could feel happy with the Indians, even those always about the ranch. I was trudging behind my father on the trail from Spanish Ranch to 22 Mile Bar; we were passing a clearing that was reforesting itself with scrub oaks, and unlike the open floor of the great pine forests of California, the scrub oaks were in a thick mass, more like a New England deep woods.

Father thought he heard a moan, and we both stopped to listen. Carefully listening he decided it was a human being in distress, so we followed through the thicket until we came upon an Indian, apparently squated at the foot of a small scrub oak. Having heard of the devilish trick that is sometimes played by one tribe on another, father immediately knew what was the matter. They had taken this naked Indian, folded or

crossed his legs around the tree, and then forced his body down in a sitting position, the tree between his legs, leaving his hands and arms free to struggle to release himself.

Now if the proper size tree is chosen and the subject is forced firmly down with the tree between his legs, he is tied by his own legs tighter than with steel chains, for the harder he pulls to free himself, the firmer will his legs grasp the tree and hold him a prisoner. In this way a wild tribe had fastened and left this young Indian to die. He was moaning in great pain for he had strained and wrenched himself to the point of exhaustion in his terrible struggling. With great care father and I tried to release him, but this could not be done without lifting the man, slipping him, so to speak, straight up, so his legs, which were all but paralyzed, could be unwound from the tree. Unfortunately I was such a small child, I did not have the strength to lift my side of the man. Experience has taught those who know about this fiendish practice that one strong man trying to help another get free will simply succeed in tightening the legs, as one person alone can lift but one side. As an illustration, take a close-fitting ring that will just fit a broomstick handle. Try to remove the ring by lifting from one side, and you will find that it

cannot be moved but will actually tighten the ring upon the stick, but if lifted from both sides, it can easily slip up.

Father had to leave me with the Indian and go several miles back to the ranch for assistance. The poor fellow had been fastened there for several days and was nearly dead; but after careful nursing at the ranch he recovered and returned to his tribe.

This was only one of the many acts of kindness that made a firm and lasting bond between father and the Digger tribes in all the northern section of the state.

"INSIDE OR OUTSIDE"

I T was my first trip "down country" on the stage. I was about five. During my childhood the daily excitement was to gather with the Indians and miners to witness the arrival of the stage coach that brought both news and visiting miners from the outside world. Now my time had come to see for myself that mysterious place. The stage coach was drawn by six horses and was the old-fashioned type, a "dead axe" slung on wide long straps that rocked like a cradle and had both inside and outside (top) compartments. There was no room for even a small boy on top, this space being taken by important people, so I was alone below, and time hung heavily on my young mind.

My hearing was always acute, so I was listening to the conversation from the passengers on top. Father was one of them. His keenest interest in life was music, and even to talk about it was a joy to him. At that time Clara Louise Kellogg was making a great furore in the East on the stage. After an absence of twenty-five years, he was going back East to have me educated, and he was saying that he was determined before returning to Spanish Ranch to hear the

great singer "on the stage." He kept repeating many times how wonderfully she must sing and always "on the stage."

The moment came when I could stand it no longer, for he kept saying that she was singing to great crowds everywhere "on the stage." I stuck my head far out of the window and looked up. "Father, Father, does she sing on the inside or on the outside of the stage?"

The amusement of the passengers can be imagined. Of course, I had never seen anything but a "stage" coach.

CRAFTSMANSHIP

I COME naturally by my love of craftsmanship—inherited from my dear pioneer father. All his life he was the first man on the job to take the heavy end of the log. With all his many duties and occupations at Spanish Ranch he found time to make all the wrought iron work about the ranch with the greatest care, even to the hinges of the doors of the barns and out-buildings. The work at his anvil and bench was his greatest joy. Nothing was ever slovenly about him nor was he ever satisfied with a make-shift. The pictures show that after all these years the buildings are still intact and in good preservation.

Every Saturday afternoon for over sixty years

CRAFTSMANSHIP

53

Father's habit was to gather a handful of pitch pine splinters, an armful of wood—always the exact amount—and trudge down to the center of the meadow in front of the ranch buildings where he had made a bath house over a marvelous mineral spring. Inside he had a stove with a large tank and a huge bath tub gouged from a sugar pine tree.

After lighting the fire in the stove, he would make another trip to his wing of the house. Father lived in one side and his partner, Dick Thompson, lived in the opposite wing. I can see him now as he walked briskly toward the bath house whistling cheerfully. Over his arm the towels and his brilliant red flannel underclothes, with the white tapes and strings dangling from the legs, made a splash of color against the vivid green meadow.

Oh, the water of that spring! It is there now. As you submerge your body in this wonderful sleek tub, a strange sensation comes over you, for you seem not to feel the moisture of water, it is more like an effervescent oil, it does not seem to touch you. After you get out, your body hardly needs the touch of the towel, evaporation takes place at once, leaving a tingling exhilaration.

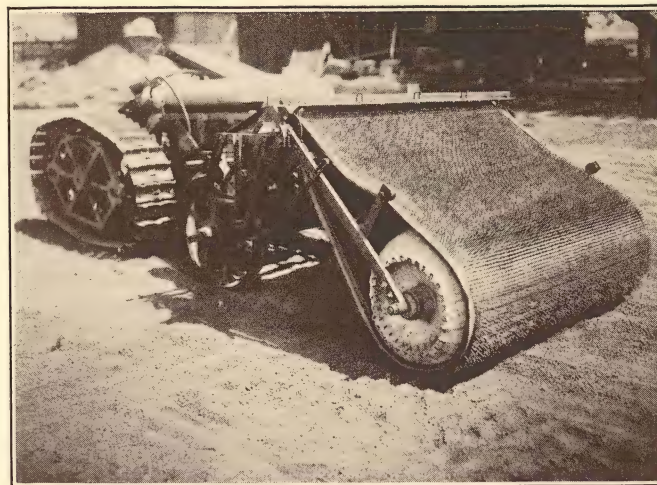
Father was eighty-four when he died, a work-

er to the last, vigorous, cheerful, and happy. It seemed as if he could have lived on indefinitely but the coming of civilization through the rail road grieved him. The year before the track was laid he said to us, "When the train comes through, I am going." A year later with apparently no ailment he lay down one late afternoon and slept. Suddenly he woke and said, "Lift me up and turn me to the west. When the sun goes down I am going with it."

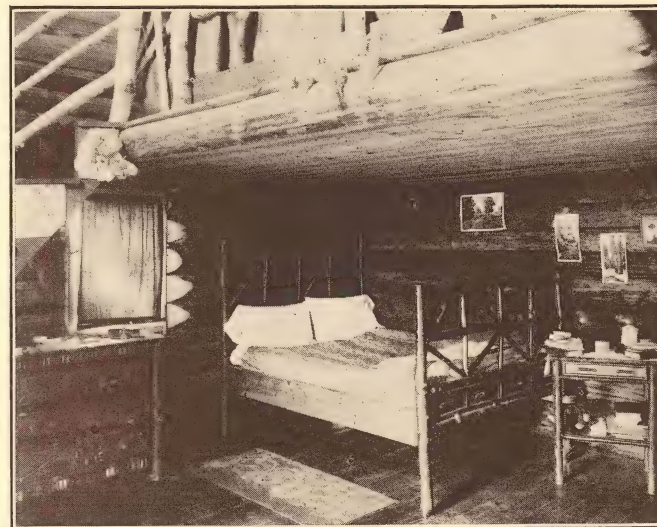
And it was even so.

My love of fine craftsmanship I owe to an uncle by marriage, Uncle Christophe Becker. I have told in another place how Father took me East when I was five or six to his sister in Syracuse, Aunt Caroline Becker. Uncle Becker was a true craftsman and artist besides being a rare musician. Daily I used to climb onto a chair to look over his shoulder, watching his marvelous hands. He was one of Tiffany's experts in diamond cutting, cameos, and gold and silver work. He never left his work shop and garden but did the work at home, the orders and material coming from New York. He had a garden that was as artistic as the rest of the things he did and so I learned to love a garden too.

Uncle Becker made his own tools. Each commission required the making of special tools. His



I INVENTED AND MADE A FRUIT AND NUT PICKER ON MY RANCH AND HAVE BEEN GRANTED A BASIC PATENT ON IT



I MAKE MY OWN FURNITURE

bench was a glorified roll top desk with heavy swinging open sides filled with tools of his own making. From his swivel chair in front of it he could reach them all. I once asked how many, and he said, "Why, boy, I guess over three thousand."

My happiest hour was when Uncle Becker took out his great base viol. Although I knew it meant bedtime for me, I would hear him playing on and on and I could call out for my favorite tunes. But when the first note struck of a lovely old German folk song, no word was allowed after that. It was the "Bow Down Song." All those who have camped with me know very well this little folkslied. No matter how gay and jolly the chatter, nor how great the pleading for "just one more story," the first note of my "Bow Down"—and all submitted to this well remembered discipline of my childhood.

A little hammer of tooled steel whose side faces are engraved and carved with beautiful original designs is fit for a museum. This and a few other tools are all that are left of Uncle Becker's exquisite workmanship. They belong rightfully to my older and only brother, John.

FIREPLACES

MAN'S first need is water; next comes fire, and always as close together as possible.

So fireplaces with running water in them have been my hobby. The origin of it dates from my earliest recollections. It was inspired by a visit to 22 Mile Bar. Below Spanish Ranch, on the Feather River, at 22 Mile Bar, lived an old Indian woman. Every fall Father's pack train of twenty to thirty mules would make the trip to the different camps at the Bar. On the opposite side of the river, deep in the canyon, and clinging to the mountain side was the Indian woman's cabin. It had a one-sided roof, built like a snow shed, the roof shelving directly into the side of the mountain. This was so the snow would slide over the steep roof without crushing the cabin. At times during the winter the snow was so deep she could not get out to the brook, so she had led a part of the brook through the floor of the cabin and across the hearth of the fireplace. Father allowed me sometimes to go



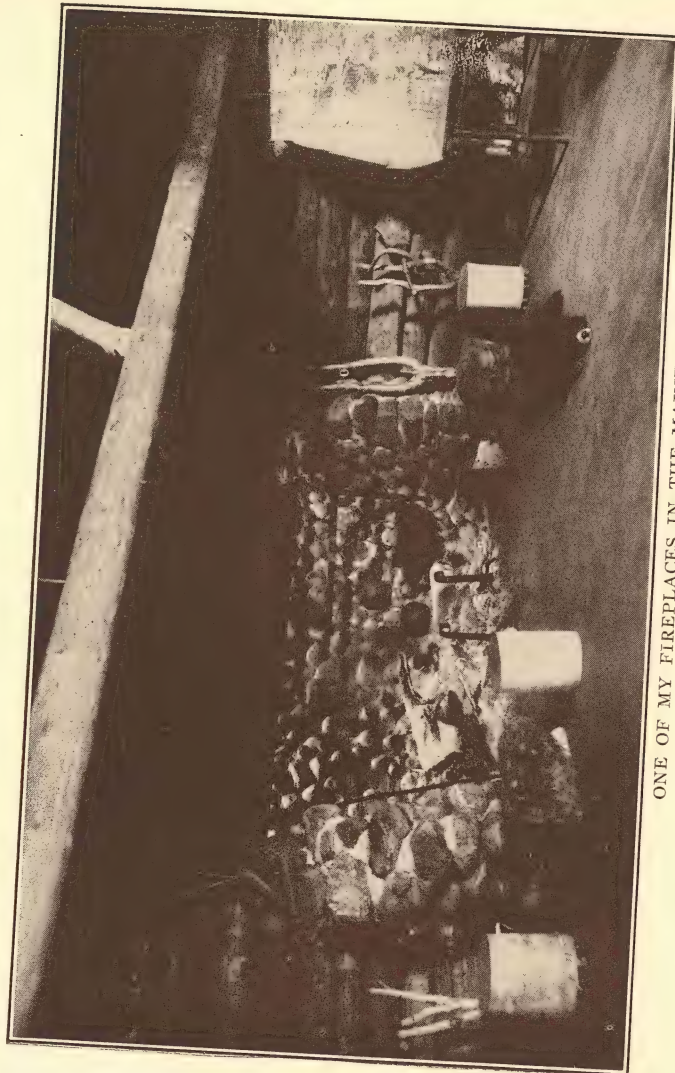
I CAN ROLL THIS FIREPLACE TO ANY DESIRED SPOT ON MY HOME TERRACE
AT KELLOGG SPRINGS

with the mule train, and the kindhearted squaw let me play in that little brook in the fireplace.

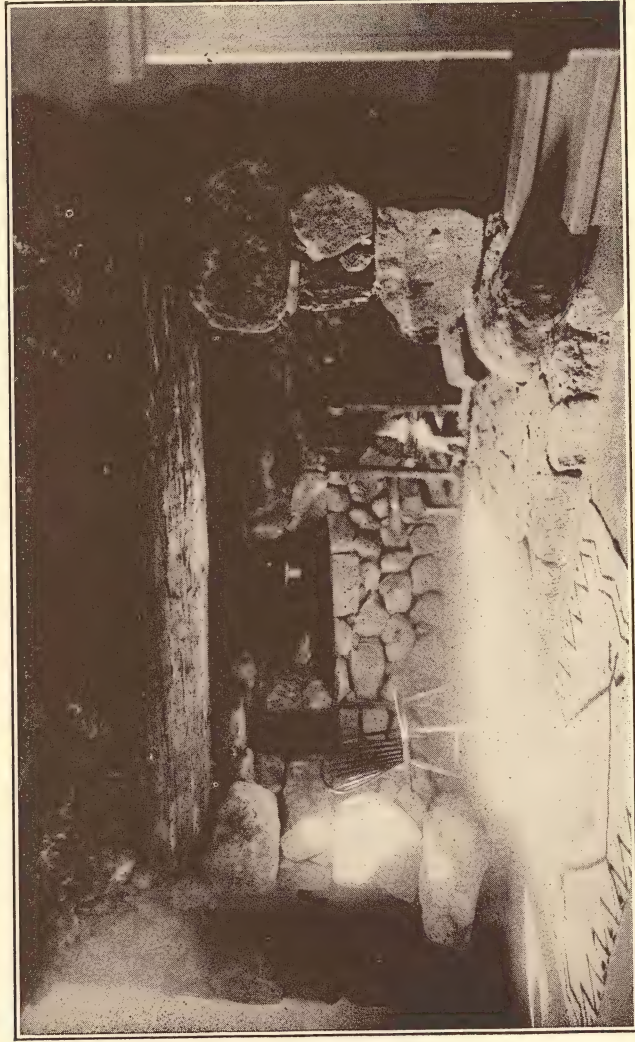
From then on, wherever I have camped or built, water must be at hand, or for a permanent home, developed. To find water where it is needed seems to be a gift with me, and I have located many wells and hidden streams. Because my work in this line is unstandardized, I seldom take the responsibility of doing this for others.

Water having been secured, I build my fireplace. Camping for even a night or two, I build an altar. It may be just a couple of stakes in the ground with a flat stone to hold the fire. Or it may be rocks piled high enough for comfortable working. Many novel and ingenious ways can be worked out with little trouble by any woodsman. There is no need to squat and stoop and inhale smoke from a flat-on-the-ground cooking fire.

Real fireplaces in the home must be large enough to burn great logs, and wide enough for a little brook to cascade down the sides and run across the hearth. At least twelve to fourteen feet wide, six or eight feet deep, and five or six feet high. Sometimes I can have only a drinking fountain or a trickle of water into an Indian stone bowl, but somewhere in the fireplace I always provide a place for water.



ONE OF MY FIREPLACES IN THE MAINE WOODS



I BUILT A FIREPLACE FOR MY NEIGHBOR

II.

TRAILS AND TALES

"THE MUSHROOM"

IN the "Ever Ever Land" all things are possible. Where is it? Well, it is just wherever

I happen to be. In the southern bayous, lagoons and keys, the cool, green forests of Maine, the barrens of Newfoundland—Caribou Land—the in-and-out-in-and-out water ways and portages of Hudson Bay, but best of all in my native California mountains.

It was here that I resolved to carry out the long cherished plan of building my ideal home. Born among the woods creatures in the high Sierra of California, and living with them a good part of the time, I have learned many secrets of their useful and harmonious lives. A most important one is—*they need no back doors*. How

few human beings take pride in having their back doors as neat and attractive as the front; and the approach — back doors — to villages, towns, and cities, is more often than not unsightly, dirty, and disorderly. But the nests of birds and the homes of wood folk are clean and tidy, back, front, and all around.

The birds, squirrels, chipmunks, foxes and all fur-foots, indeed all the wood folk, are so cleanly in their habits, so frugal, so clever in the disposal of any untidiness, I learn from them all the time, and am never bored or lonely in their society. The homes of the woods creatures are as beautiful and ingenious as they are simple and practical. This simplicity and beauty I wanted to embody in a human habitation that would be practical as well.

For a short season in the California mountains, the sap ceases to flow and the rains pour down blessings. It had been my dream to sit by a campfire indoors. My idea was a room which would be as nearly like the outdoors as possible, for the fire was to be a real campfire on the floor, right in the middle of the room, without any chimney obstruction—a fire all could sit around instead of huddling together about a hole-in-the-wall.

It is my delight to look out over the tree tops

to the valleys below, and I realized that just where I was, on the thickly wooded slopes of the Santa Cruz range, I could find the desired location. One morning, therefore, in the late fall, high up on a mountain side, I swung my double-bitted axe in a grove of the most beautiful of all California trees, the madrones.

I cleared only enough of the small trees and underbrush to enable me to square out my "6-8 and 10" and I heeled the back of my floor frame on the steep slope. This made the front porch a twenty-five foot drop to the ground. It extended over the tops of the slender madrones, and a circle of young redwoods below came just to the porch rail.

Like magic, the timbers shaped themselves into the form of a habitation, and the lines of the surrounding woods and mountains stood out in their true harmony and beauty. A landscape never seems as beautiful as when it is seen from the window, the porch, the tent, or even through the open barn door; for the homes of men are the center and focus of all nature.

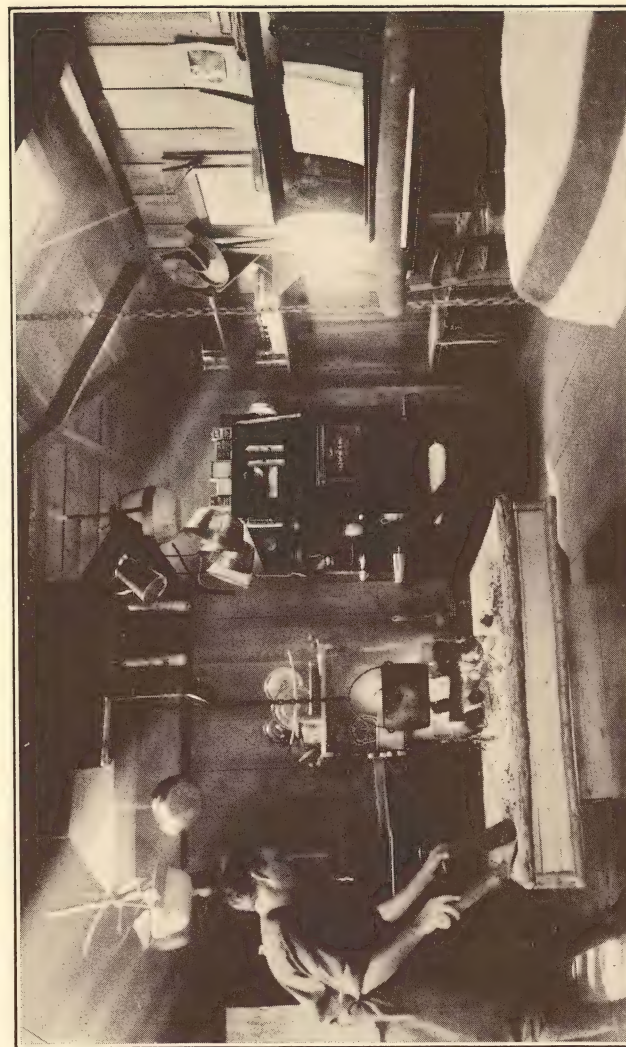
In my cabin I wanted to enclose, not to close out, the sights and sounds of the woods. I am told that to build, you must first draw your plans. This is perhaps the correct way for others. But wherever I happen to be, in the woods, in the

wilds, I build a home that grows without plans as I work.

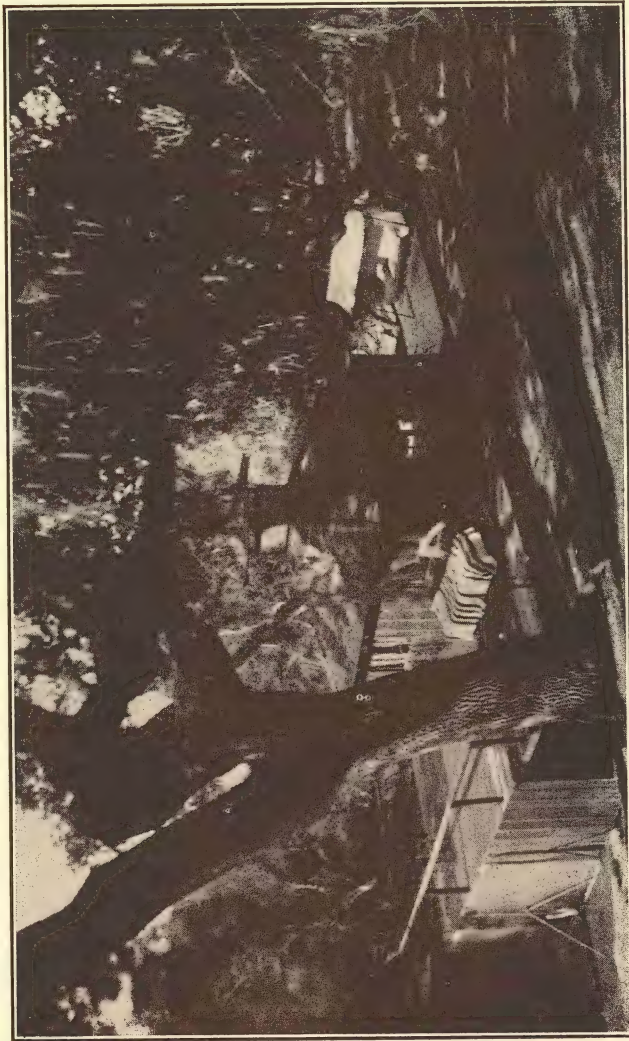
It was in this way my cabin grew. A pagoda-like roof, low, hat-shaped, with a three foot overhang, gave that brooding look, suggesting a nest and cosy comfort. Daylight and starlight come best vertically. Those who have only windows that let in the side light do not know the joy and inspiration of sky lights. Several of these were placed in the roof. Glass in the wide, swinging Dutch doors enabled me to look over the tree tops and across the valley to the mountains beyond.

Light was streaming in everywhere. The eyes of those in the "Ever Ever Land" have no need to be shielded, so there were no blinds (that terrible word), not even curtains, as there were no gazers, only the leaves tapping on the panes.

The end of the tenth day I stood at the doorway of the cabin; behind me, the rays of the setting sun shone into it like a searchlight. For the first time I saw the wonderful beauty of coloring in the fresh cut redwood of which the cabin was built. The shingles were rose red flakes, and floor, sides, and ceiling glowed a deep pink. This beautiful coloring, the shape of the overhang roof, and the speed with which the cabin had grown, all came over me at once. Involuntarily the word "Mushroom" sprang to my lips.



MY MOVABLE FIREPLACE IN THE INTERIOR OF THE MUSHROOM



THE MUSHROOM

The roof had much the same shape as the pileus of the common field mushroom. The rafters inside suggested the pink gills and easily carried out the thought. But what preoccupied me most was, of course, the central idea and purpose for which the cabin was built.

Each day as I worked, my thoughts had been concentrated upon my campfire, so my first concern had been to make a three foot open yoke in my roof center. To this I framed the rafters, and from this open yoke I hung down into the middle of the room a bell-shaped hood. The roof sloped from the seven foot walls up to a twelve foot center, and the hood depended five and a half feet from the yoke, leaving a clearance of six and a half feet to the floor. The wide flare of the hood was intended to gather the rising smoke. Instead of the usual chimney I built a little cupola with open sides. This gave a finished look to the outside of the cabin, and afforded ample protection from wind and rain for the fires beneath. I lined the cupola and the inside of the hood with heavy asbestos board.

Not knowing how I must place the fire under this novel chimney in order that it should draw, I experimented by making one directly on the floor on a large piece of asbestos board. In this way I could raise the fire to any desired height.

The result was startling—on the floor or lifted close under the hood, it made no difference, for the smoke was sucked up readily and did not spread out into the room, even with one large door open.

I had fancied a sort of altar-like fireplace; so on a pedestal about a foot high I built my altar, four feet square. It was large enough for a roaring blaze of logs, but my woodsman's habit is strong for small fires, and because of the complete circle of radiation, a moderate fire thoroughly heated this big room while a large one could not be endured without opening up all around.

Although this was in California, the winter nights in the mountains can be bitterly cold. Once in a while ice forms in the water pails a quarter of an inch thick, yet the altar fire thoroughly warmed me and lighted the room as well, and I seldom needed a lamp. In the hole-in-the-wall fireplace a great part of the heat goes out the chimney, and while logs may glow and flames mount up, who would not exchange it for a real camp fire? And here it was, just as I had dreamed it, open and free, right in the middle of the room!

Shelter and warmth were now secured. Next, water must be provided. From the spring above,

a concealed pipe led into the house. I want as little as possible of the products of commercialism about me in the woods. My sink was hewn, watering-trough fashion, from a large log—the water entering through a gnarled branch that formed a wooden spigot. The useless ugliness of the common fixtures, spigots, door handles, hinges and hooks, in even the most costly houses, have always been an eye-sore to me. Nature is so full of wonderful examples in this direction. Many of her devices can be used for these purposes. Gnarled roots, twisted branches, bark, and stones, with a little adapting, can be utilized to form natural hinges, faucets, hooks, latches, seats, and many other things. These natural furnishings are very different from the commercial "rustic" work which people have come to look upon as the expression of wood craft.

The elimination of useless house labor has always been one of my hobbies. As a child at Spanish Ranch, my greatest privilege was to visit the miner in his one-room cabin. There, all the duties and occupations of household work took place before me. My host did not have to excuse himself to go into the kitchen. His kitchen was a neat stove on one side. Here also were his entire winter supplies, bountifully displayed. He

did not exclude me from his bedroom, for his bunk occupied a corner of the cabin, with another above it for a chance visitor. On a wide shelf stood his little library of books and papers. His household work was the incident in his day, not the perpetual drudgery it is to nine-tenths of humanity. He had nothing to be ashamed of, and so nothing to hide.

It would seem as though human beings are actually ashamed to be seen preparing food, washing the dishes which they have eaten from, making their beds, and doing all the many duties that should, and could be, open, pleasant, and entertaining. It is bad enough when each family does the work for itself in this complicated secret way, but what can be said of a "civilization" that demands a race of slaves who must lead hidden lives, doing hidden work as though in perpetual disgrace?

My kitchen offered no problem, for plain thinking and living demand simple food; yet one of the greatest delicacies grew in abundance all around me—mushrooms of many varieties that gave zest and distinction to ordinary dishes. I evolved a method of cooking that yielded surprisingly fine results. Deep in the ashes of the fire-altar I embedded a large stone crock with a tight cover. Vegetables of all kinds cut up in



COPRINUS COMATUS
(SHAGGY MANE)



OVERLOOKING THE TREES FROM THE PORCH OF THE
MUSHROOM

cubes—carrots, potatoes, onions, celery, with a sprig of parsley, tarragon, thyme, or sweet basil from the old Frenchman's garden two miles down the trail—these, in different combinations, made a staple that was always acceptable. The vegetables could be prepared at any convenient moment, and put into the tightly sealed crock with a spoonful of olive oil or butter. The ashes remained hot all night, and the next day a fine dinner was ready at any time. The different flavors of the vegetables and mushrooms were blended in a way that would delight an epicure.

My arrangement for a dining room was a large solid table that combined dining table, sideboard, cupboard, pantry and storeroom. Imagine the waste of energy and God-given time in the preparation of one meal for the average family! Running to the storeroom for flour, the pantry for butter, the cupboard for dishes and utensils. How much unnecessary labor! My table combined and held everything. I built it with shelves underneath, shelves above, open cubbies on the sides, and a roof shelf for stores and supplies—nothing hidden.

My guests and I do not separate for the preparation of a meal. We sit down to this table where there is always room, for extra places can be provided by pulling out slide extensions.

After all are seated, we reach up and take from the shelves, cubbies, and cup-hooks, whatever is necessary, and all "set the table" together.

The pots and pans hung from the flare of the chimney hood, and without moving I could reach all the utensils and supplies from the table. Kitchen and dining room occupied but one corner, leaving the rest of the cabin for bedroom, library, music room and workshop. For me, a home is not complete without tools and a convenient place to use them. There is nothing unsightly about an orderly work bench with well-kept tools, so a bright corner under one of the skylights was apportioned to this.

I have a preference for hard beds from much sleeping on the ground. My bed, therefore, was a sort of board hammock swung by log chains from the ceiling. A chest of drawers, and chairs with seats of braided rawhide thongs, completed the furniture for everyday-convenience.

As with every country boy, the woodbox of my boyhood seemed a yawning chasm always needing to be filled. It was usually in the most inconvenient corner, and the many intervening doors and turns to the woodshed made the task of replenishing a punishment. In this home there was to be a radical departure from all the old ways. Under the wide overhang, on the side

wall of the cabin and just beside the door, I built a wood chute. It was funnel-shaped, very narrow at the bottom, flaring widely at the top, capable of holding a half cord of split wood. A sliding panel inside the cabin, waist high, gave me easy access to the wood, as in this way it was fed to the opening.

Home life in the woods is by no means confined to providing shelter, warmth, and food. With the daily duties so simplified, a true leisure becomes available, and intellectual and spiritual needs have opportunities that are scarcely possible in any other way of living. The last remaining corner was furnished with bookshelves, a piano, and a comfortable roomy writing table.

In this manner the circle of life was complete in the "Ever Ever Land."

TUMP LINE CARRYING

WHEN properly packed, a horse can carry sometimes three hundred and fifty to about three hundred pounds; a mule four hundred pounds, but a burro can carry almost his own weight. A man can carry not only his own weight, but several hundred pounds besides.

As a boy, my Digger Indian folk taught me what was similar to the tump line or head carrying; they carried a conical shaped basket which rested on the back between the shoulders, and the tump line was fastened from the top edge of the basket over and about the forehead. But it was only the squaws who carried the baskets in this way when they gathered roots or

nuts; they dug the roots with a crooked stick and tossed them back over the shoulder into the basket.

Therefore, during my first trip to that most fascinating of all camping lands, North Bay in the Tamoggamy district in Canada, it was no new thing to me to find the Ojibway Indian carrying with the tump line, but I was amazed at the tremendous loads which they would undertake, pushing their way through the heavy growth on the carries, shod only in thin moccasins. The Ojibway tump line has a broad leather band over the forehead with two lines, like long reins, and he always has to have help when loading.

In one instance I saw a man carrying five one-hundred-pound sacks of flour, and perched upon the topmost sack, a large steel range. His name was Petrant. It was afterwards my good fortune to have him for my guide, and I questioned him about these loads. He told me the weight was often six or seven hundred pounds, so when I asked him how much he could carry he said not very much, only about eight hundred pounds, but his father had held the record in all that country for many years, which was thirteen hundred pounds.

Once on the Montreal River en route to

Moose Factor, I came upon a large birch bark canoe with thirteen people, floating toward the entrance to the carry. The canoe was loaded down with flour and provender, about five thousand pounds, besides the thirteen Indians with their children and dogs perched on top of the load. I was greatly interested to see how they had been able to weight down this frail bark canoe without jack-knifing it. As they unloaded, I saw that in a most ingenious way they had first put a long birch pole the length of the keel in the bottom, and two equally long poles on either side; then by carefully placing the sacks of flour on them it evened the weight so the canoe could not break or jack-knife.

Unlike most Indians, there seemed to be with this crew a great deal of mirth, and I learned from my Ojibway guide, who could speak a little English, that one of the bucks had been married the night before by the priests at Hudson Bay post at Bear Island. It seems that whenever there is a wedding, the bucks delight in horse-play and jokes upon the newly-wed couple. In this case it was to try to overload the poor bridegroom with sacks of flour, and then do the same thing with the bride, until actually their legs were bowed beneath the tremendous loads, but I did not see any hesitancy upon the part of

either to courageously strike out up the carry, which was over and around rapids and falls.

I noticed on top of the load, as the canoe approached closer, a most interesting looking basket, and I was anxious if possible to get a pattern of it. So I said to my Indian, "Petrant, I want that basket." He looked over to the group of Indians and said, "I try." After about an hour, seeing he made no move, I asked him how about it, but all he said was, "Wait."

Evening was coming on, and I saw if I were to wait much longer I would have to follow the entire party back where we had just come from; this I was quite willing to do, for it promised me an interesting experience. They were returning from their yearly migration to the lower country where they were met by the Canadian government officials, who once a year presented each man, woman, and child with five dollars. As it turned out, this was the last of these migrations for the Indians to receive their dole; always after this the government sent agents to the various villages to distribute it.

I camped with them that night at the upper edge of the carry. All evening long Petrant sat talking by the fire with the squaw who had the basket. At ten o'clock I called him to me and again asked how about it. I was amused

to hear him still say, "Wait." "But, Petrant, what does she say?" He answered, "I not ask her yet. I wait." I soon found what the psychology of the Indian meant in this case — talk about everything else but what you wanted.

The next morning as they were about to start out, I saw Petrant again talking to the squaw; he took out his big red bandana handkerchief and spread it upon the ground. I saw her take the basket and empty its contents into the handkerchief, and then he came to me with the basket and said—"Fifty cents!" This, of course, I gladly gave and had Petrant give her a present besides. It had evidently taken all this time to prepare her to part with the basket. I prized it very highly and learned to make others like it. I could fill it with water, put it over the coals and boil my vegetables, make tea, or cook my broth, without burning it. All wood scouts know how this is done; even a birch bark container, if kept carefully filled with water, can be put on the coals without burning.

While watching these people that evening at the end of their carry I learned for the first time how they repair their canoe should a hole be torn in it. Just as they were landing, they had snagged its side against a sharp rock. The men vaulted into the water and lifted the canoe above



THESE BIRCH BARK PATTERNS I BOUGHT FROM THE INDIANS
OF HUDSON BAY



TUMP LINE CARRYING IN HUDSON BAY REGION



PETRANT (WITH PADDLE), OUR STURDY CANOEMAN

the water line and hauled it up. It was quickly unloaded and some of them got out their tump lines and started packing across the carry. Several remained to work at the canoe. They went into the woods and returned with large chunks of spruce gum, while others built a fire, and one Indian cut a long green stick, forked shaped, like a sling shot, with the legs close together. Another cut a large piece of birch bark for a patch and with split spruce roots sewed the patch over the hole. When the forked stick was flaming, the Indian yanked it out of the fire and plunged it into the sand, quenching the flame and leaving it glowing like a red hot tuning fork. While one of them dropped pieces of gum onto the seam, the other held the glowing fork over it, and kept blowing on it until the melted gum spread. They continued this until the patch was completely sealed, and in a few minutes the canoe was ready for the water.

This showed me how much more practical a birch bark canoe is than the famous Old Town canoe, at least when a hole has to be patched.

"MY SQUAW"

WE had thrown down our packs beside the trail near Upper Stewiacke Cross Roads, Nova Scotia, and were listening to the silence. I soon heard a soft footfall—experience told me it was someone in moccasins. In a moment an Ojibway Indian stood before me.

"How," I said.

"How," he answered in the low guttural of the Indian.

"Where go?" said I.

"Settlement."

"What for?" said I.

"Matches."

"Oh, but you are an Indian, why go settlement for matches? Why you not rub sticks, make fire?"

"Don't know how, old buck know how, old buck dead.

"Why you go this way settlement? Shorter way is over mountain."

"I follow river."

"All right," said I, "but I must light a fire and I have no matches, so I rub sticks."

"Show," said he.

Now, I thought, here is a chance to give back to an Indian not only the art of fire-making, which his people seem to have lost, but my own way of doing it. So far as my experience goes among primitive people I have never seen it done in the way I do it.

I observed he had a most unusual knife with a queer handle, so I said, "Lend me your knife." He handed it to me and with his knife I cut one piece of spruce and another of fir; the fir I used as a base piece, the spruce as a drill. I then hunted for a good ash stick. After cutting it to the right length for a bow, I took off the rawhide lace from my high topped boot, and made a serviceable drilling thong. With a knot for a hand-piece, which I picked up almost at my feet, I was soon vigorously drilling (rubbing) for a fire. In a few moments I had the spark, and without the usual custom of hunting for punk, I breathed the spark into a perfect flame. Before I was able

to get my breath, as the Indian saw the flame burst into life, he said, "Do again"; whereupon I immediately resharpened my drill, cut my notch, and began the rapid bowing once more. The Ojibway followed every move. Hardly had I succeeded in bringing forth the flame the second time and was nearly breathless, when he again said, "Do again."

I did not want to give in before an Indian, so I went at it the third time, and at the last gasp of my breath, as the fire burst forth, I said to him, "Now you do," and handed him the bow and sticks. He cleverly and carefully imitated me, but the spark did not seem to come, although he continued drilling until he dropped over almost exhausted. I waited a moment and then said to him, "Do again." Courageously he got up and tried it the second time. As he was about to give up, panting, I knelt over him, holding his body rigid. Reaching over his shoulder I grasped his right hand as he held the bow, and continued rubbing with him, guiding him in the correct angle and position to successfully rub off enough hair-like carbon to create a miniature volcano, with a tiny spark on the inside of the mound.

I saw the spark would continue to brew for a moment, so I let him rest till he got his breath. Then I showed him how to quietly breathe, not



STARTING A FIRE WITH RUBBING STICKS



BREATHING THE SPARK INTO FLAME

CORRECT POSITION OF THE BOW DRILL, AND NOTCHED
BASE PIECE

blow, upon this delicate, fluffy, featherlike mound of carbon with hardly more body to it than a soap bubble. In a few moments the flame burst forth. I saw he had mastered the secret of fire-making without punk.

His first expression when his breath came back was, "Now, I give," meaning that he wished to give me something for my trouble, in gratitude for the pains I had taken to teach him. The knife which he loaned me fascinated me. Evidently he had made it with his own hands, so I said, "You know what is a pattern?" I pointed to the blade. He looked blank for a moment, then he turned and went off the trail into the woods a piece. Returning with a stick in his hand, which I saw was hard ash, he sat down and began whittling.

With great skill he shaped a perfect copy of the blade of his knife, showing its odd construction. This was what I wanted, but when I held out my hand for it, he just looked at it and said, "Wait." He went into the woods again and got a much larger piece of ash, and started once more to whittle. I soon saw he was carving out a handle exactly like his own, and I guessed it was for me. I would have been perfectly content with the plain cleverly shaped handle just as it was, but he was not satisfied until he had duplicated

the carvings of his own worn out knife. After the handle was finished he took the blade out of his old handle, mounted it in a most ingenious way into the new one, and handed the finished article to me, which to this day remains one of my cherished possessions. It has been my constant companion, seen by thousands of people in all the theatre performances wherever I have produced fire by friction.

As I was kneeling over him struggling to show him how to bring forth the flame, a woodsman with his river-drive boots came up and looked on at what we were doing, but he said nothing until after I had finished. Then he said, "Surely you must think a good deal of a buck to go to all this trouble."

"Yes, indeed I do. I was brought up with the Digger Indians in the high Sierra of California.

"Well," said he, "my wife and I find most white people in these parts don't pay much attention to the Indians; but you know how the bucks and squaws go to the country dances, and how they just sit round, sort of meek, not taking any part, just lookin' on. Well, a number of years ago at Musquodobit at a dance, my wife saw that a squaw was sick and her baby was hungry. All the Indians believe that a baby must not be put to the mother's breast while she is afraid, or

angry, or sick, for they think it will poison it. So the squaw wouldn't nurse it. My wife went over to her and as she had a nursing babe of her own at that time, she put the little hungry papoose to her breast and nursed it."

All the while he was telling this story the Indian was whittling away and seemed to be paying no attention. At the close of the story he looked up and said just two words — "My Squaw."

The riverman jumped up, peered into the Indian's face—"By God," he said, "it's the same buck." This had happened years before and as far as the white man knew they had never met since, but the Indian had not forgotten the kindness of the white woman.

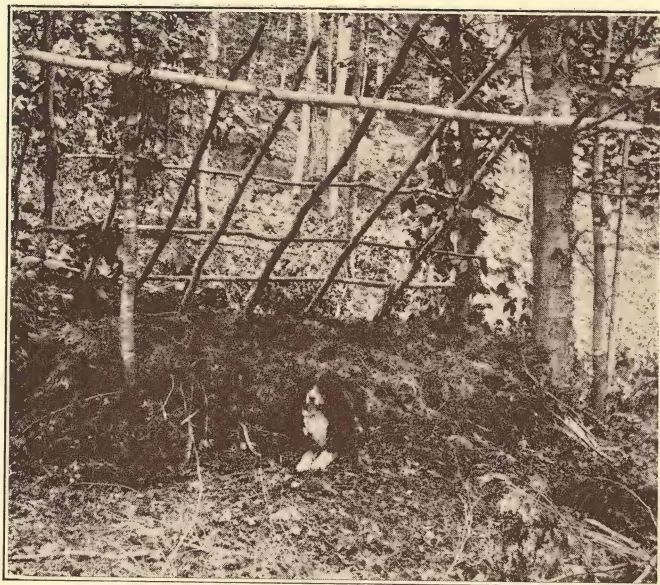
THE LOST WOODSMAN

AT my camp in the deep woods of the Rangley district in Maine, in the fall of the year, I was on my back underneath my Stanley Steamer caulking some burnt out tubes. I was hammering away making such a racket I did not hear the approach of a man until I suddenly noticed a pair of high-topped river-drive boots standing beside the car. I stopped hammering and waited for him to speak; but finding he said nothing I called out, "Who is in the drive boots at this time of the year?"

A voice came back, "Damn if I know, I'm lost."

"Well," said I, "consider yourself found; you are at North Newry, Maine."

"Hell," he said.



THE BOUGH DOWN IN THE MAINE WOODS



CAMPING AT NORTH NEWRY, MAINE

"No," said I, "it is nearest to Heaven of any place I know outside of my mountain home in California." and with that I crawled from under and looked into the frightened face of a man who seemed to be a real lumber-jack.

"Which a'way is Bethel?" said he. I pointed east, and he said, "My God, that can't be."

"Yes, it is," said I, "and surely you are good and lost if you don't know it. How did it happen?"

"Why, I started out early this mornin' cruisin' for timber and since five o'clock I've been goin' around in circles until I heard you poundin' on this machine, and that brought me down the mountain. Say, I'm in trouble—it's gettin' dark and my wife'll be plum crazy if I don't get home soon. Couldn't you take me to the Berlin Mills camp in your machine? How far is it?"

"Twenty-two miles around," I answered, "and I can't take you because several of my tubes are burnt out and I can't fix them before morning, but it's only five miles across the mountain and by getting a good hustle on you, it would not take long."

"No, no," and he almost shuddered, "I daren't tackle the woods again alone."

He spoke in such a suffocated voice it made me look more closely at him. He was a tall, rangy, youngish fellow, a common type around

the Maine lumber camps, but the expression on his face was what struck me—it was haggard, with a sort of greyness underneath his ruddy color and his eyes looked like a hunted animal.

"All right," said I, "I'll guide you across." I looked up and saw my black cook standing in the doorway of the kitchen watching him and I sang out to her, "Barthenia, make a cup of tea as soon as you can."

But he said, "No, no, please no tea, no food, only let's get started, don't let me lose a minute—I must get home."

He spoke again in the same low smothered tone, and his voice was so frightened and distressed I noticed Barthenia was crying with sympathy and she said, "Do make the poor man come in and let me give him somethin' warm."

At this time of the year it was already quite cold, but we could not induce him to wait even for a few minutes. So I grabbed my jumper and started to go up the trail, when Barthenia called anxiously after me, "Just a minute, Mr. Kellogg, do take a lantern, you'll sure need a light in the woods when it gets dark."

I reassured her, "Now, Barthenia, don't you know that's the very way I might get lost? A light in the forest at night leads you all wrong, it throws reflections that look like trails."

The man was impatiently starting on but called back to me, "Have you got your compass?"

"No, certainly not, I have never owned such a thing. Let me tell you I've been in many forests and have never needed one. My sense of direction has never failed me, and it won't fail me this time."

All this time the woodsman was becoming more and more anxious to be off, so we started at a trot. After climbing for about three-quarters of an hour in the deep timber, it became quite dark, but not too dark for me to see a fresh blaze on a tree.

"Someone has been here today," I said.

He looked at it. "That's my blaze I made this morning."

A little farther on I saw another, then still another; their direction showed me plainly that he had been going in a complete circle. He began arguing with me.

"Say, you talk like a city man. Have you ever been across to the Berlin Mills camp?"

"No," I said.

"Then how do you know the way?"

"By the sense of direction, the God-given sense we all have if we'll only pay attention to it, and it has certainly never failed me."

We started on again, walking faster, and all

the time he was complaining biterly that we must get on, that his wife and children would be so uneasy at his not returning, and was I sure, and did I know where I was going, etc., etc. At the end of an hour and a half we came upon more blazings, and again he started arguing with me.

"Are you sure you have never been here before?"

"No, never."

"Well, then," he said, "we've sure gone in circles, haven't we?"

"No," I replied, "this time we have crossed the circle."

He looked at me with almost terror in his eyes. "You say you have never been here before, so how can you know? Man, I'm just certain we're goin' round in a circle and now, B' God, we're both lost." He was trembling as though he had a chill. Then he added, "I'm going to wait right here until somebody comes to find us."

"All right," said I, "you can wait alone. I'm going on over to the Berlin camp," and I started out. He did not follow for quite awhile, but after a little I heard him call, "Wait a minute, wait a minute, I'm comin' too."

"All right, come on, come on," and I kept calling so he could find me. In a few minutes I saw

that we were at the crest of the mountain looking down, and there was just enough light to see that way beneath us was a cutting. I had always heard that the top of the mountain was the dividing line between the International and the Berlin Mills Paper Company's properties. I called his attention to the spot below saying, "Can you see there is a cutting below?"

"Yes," said he, "let's go to it quick and see if the stumps are cut, for if they're cut, B' God we're lost, but if they're sawed, we're safe." And like two bull moose, we tore down the mountain-side.

As we came into the cutting, he rushed at the nearest stump and with a shout sunk in his ax to the hilt. "Sawed—B' God, we're safe." Then he turned to me and grasped my hand. "Now, friend, what can I do for you?"

"Nothing," said I. "Just you hustle on home and I'll turn and find my way back all right."

He put his hand in his vest pocket, took out his gold watch and offered it to me saying "Here, do take this."

"No, indeed, thank you," and I shook hands with him again. "I am only too glad to know you're all right now." At that I swung around and started back over the mountain, reaching home about midnight.

Six months afterwards on that same trail, I met a woodsman who knew me; he hailed me, "Say, you remember that feller you took across the mountain last fall to the Berlin Mills?"

"Yes, I remember him, he told me he was anxious to get back to his family."

"Well now, listen, what he was anxious about was the crew at the camp. He was foreman and cruiser of the Berlin Mills crew, and he was scared to death they might find out he had been lost. He knew he could never hold his job after that. Well, they found it out all right. No cruiser could stand up under the joshings they piled on to him, and he had to light out. Family? He had no family."

"MUSIC HATH CHARMS"

"**M**USIC hath charms to soothe the savage breast." Paraphrase to "savage beast," and this is what once took place. A wild bear and her three cubs came to a concert I gave exclusively for her and her interesting family, and I think the critics would have called it a success.

I heard that a great she bear with her children had been seen at the mouth of the wild, rocky, almost inaccessible canyon near my camp in the high Sierra. I was very anxious to get them for my moving pictures, so I went carefully over the ground where the bears had been seen, to find a vantage point for my cameras. I have had a good deal of experience in managing backgrounds and

creating opportunities for photographing bird life, but this was my first experience photographing wild bears.

To keep them before the camera it occurred to me to use the same method with the bears as with birds—sing to them! All woods creatures, big and little, as well as birds and human beings, love to be entertained; so I chose the setting for my concert and in this case prepared an "extra added attraction." I obtained a large pot of honey and spread little pools of it on the rocks, here and there, near the place I knew must be her natural trail out of the canyon. Then with my cameras I settled myself for a long wait. Patience and more patience is the one way to insure success in photographing wild life.

With the stage set, I waited day after day for nearly a week. In the deep canyon the granite cliffs towered over me, the rock surfaces radiated heat, and the soft breeze of the high Sierra was sweet with balsam. The gay, noisy squirrels made nimble leaps from branch to branch, the jays scolded, the lizards in great numbers ran over and under the rocks, halting on pinnacles to perform their queer little bobbing gymnastics, and high above, the hermit thrush sang his clear notes.

The smaller wood folk and the birds grew accustomed to me and played fearlessly around me,



WITH THE STAGE SET, I WAITED DAY AFTER DAY



AS LONG AS I SANG, THE BEARS REMAINED QUIET



MOTHER REAPPEARED WITH HER THREE CUBS

so the crackling of a twig or a rolling stone gave me no concern. I knew that the largest animals have the secret of absolutely silent locomotion in the forest, so I kept my eyes fixed on the spot where I felt sure she would appear.

Suddenly, without a sound a bear stood before me, motionless, not a footfall audible, not a leaf disturbed. No one can imagine the sensation who has not looked into the unafraid, calm eyes of a wild animal in his natural habitat. The busy life among the rocks and trees went on. Looking closer, I saw that this big, shaggy creature was a black male bear, not the round fat motherly bear I had expected to see. There he stood, not a hundred feet from me. He turned his head and looked at me—such a look. I was so surprised that it was not the brown mother bear, I forgot all about my bird songs, and the next instant Bruin walked slowly and majestically away into the thick brush the other side of the canyon.

I was greatly disappointed, but as the afternoon was getting on I hoped the rest of the family would be coming out for a drink.

Sure enough, half an hour later, right at the same spot and in the same silent way, mother appeared. There was no mistaking her this time. Motionless, she too, stood; then she turned and

disappeared, back where she had come from. I hardly breathed. In what seemed the lapse of a glance she reappeared, and with her, one, two, three cubs about three months old. The thick leaved branches closed behind them without a sound; against this background they looked like those wonderful Barye bronzes. One long moment, and school was out—permission was given to play. What human mother could communicate so quietly and enforce such absolute obedience? Mama reclined and gave herself up to the luxury of scratching. The contentment in her expression, and her air of domesticity and innocent pride in her offspring cannot be described. Lazily, first one big front paw raked her huge gray belly, and then the other, and her small pig-like eyes half closed in complete satisfaction.

The little ones rolled and gamboled from rock to rock and seemed to play tag, actually giving a light box and darting back as though saying, "You're it." They looked like little pieces of brown fluff blown about, so airy and light and silent were their movements. Instead of climbing the low trees scattered among the rocks, they threw themselves against the tree trunks of the giant yellow pines and stuck there. This seemed to be a favorite game, or was it practice, for they remained two or three minutes motionless, cling-

ing to the trees; then at a given signal, all let go at once and rushed for another tree.

I was trembling with eagerness to record this woods household which any moment might melt from my sight. So I began my concert of bird songs. Instantly all four bears, mother and babies, raised straight up on their hind feet, stockstill. For the space of a heart beat I sensed alarm in the little band—but I kept right on singing. Then an inaudible command was given and all sat down in a row on their haunches. For fully ten minutes this curious audience sat listening with evident enjoyment to my bird voice. They paid no attention to me or to the purr of the camera. One little bear cocked his head and pointed his ear as a puppy does when querying what is being said to him, reminding me of the popular advertisement, "Listening for his Master's Voice." The gambols soon began again and the play was continuous while the crank turned, and the bird singing kept them within the camera's focus for nearly half an hour.

Then it was all over—a shadow dropped, the bears quietly left as soundlessly as they had come. The breeze fell, the woods became still. In the fast oncoming twilight I looked around me, scarcely believing true what I had just witnessed.

I gathered my cameras with the precious films and plates, feeling sure they had recorded at least in part this experience.

For unlike previous animal photographing experiences, I had secured their pictures without a blind, bait, or the sprinkling of odors across their paths. Patiently waiting and the songs of my bird voice had brought me this rich reward.

FIVE DAYS UP A TREE IN MOOSELAND

THE name Peticodiac, when I first heard it, fascinated me. The stories of moose there were too much for my wandering nature; I kept thinking about it and longing to go, and the very next year the opportunity presented itself to me. I met some "mighty hunters" on Lake Umbagog in Maine, and around the campfire we talked and told stories.

One of our campfire guests, whom I had not



THE CROW'S NEST



FIVE DAYS IN THE TREE TOPS PHOTOGRAPHING MOOSE



THE LAST GATE OF CIVILIZATION



TRAVELLING IN THE RIVER BED

met before, was Dr. Heber Bishop of Boston, Massachusetts. It was not long afterwards that with him, I had one of the greatest experiences of my woods life. I had often heard of the doctor as a remarkable moose hunter and enthusiast, and it was said he did not care to hunt moose any longer because he doubted he could find one that would show a board (horns) as large or larger than those he had, and he already had one hundred and twenty-five to his credit. However, he told us that evening he knew where there was a moose in New Brunswick, the king of them all. He roamed with the cows back in from Peticodiac, and for fourteen seasons he had seen his tracks, but had never caught sight of him. He said he had never tried to trail him down as he once did another great creature on the Miramichi. A group of club men in Boston had told the doctor of this proud fellow in Maine, and the doctor had boasted that a man could out-tire a moose; and he wagered he could follow one up, tire him out, and put his hand on him without taking a shot—and *he did it*. This is the story he told around the campfire.

In a light snow he took up the trail. As every hunter knows, it is the habit of the moose to journey many miles from one salt lick to the next. So the doctor took his time and followed

carefully for three days, sleeping and resting comfortably at the end of each day. The evening of the third day the moose became aware that he was being followed, so instead of lying down early that night, he traveled until late. This was the first encouragement for the doctor.

With renewed energy he took up the trail and traveled considerably farther himself before resting that night. The moose now kept on going farther and farther, both day and night, becoming more and more weary. The doctor kept up his steady stalking, but only after the night's rest. At the end of the twelfth day he saw that his quarry was beginning to weaken, for every once in a while, at short intervals, he found where the moose had lain down for a time and then gone on. The thirteenth day he saw the toe tracks had begun to drag and the resting spots were more and more frequent. On the thirteenth night the doctor traveled all night, and at daybreak was rewarded by coming upon the great creature lying down. The moose jumped up immediately, but in a short time staggered and fell. This he kept up for two hours longer until he was so completely exhausted there was no more struggle left in him, and the doctor caught up, placed his hand on him, and won the wager.

But with the king of Peticodiac, it was a different matter. No man had seen this great beast. Many had seen his giant tracks, and by the size of the herds in all that country, it was clearly to be seen that he was a monarch.

I felt pretty certain if I could get into this moose sanctuary I could find him. The doctor asked to be my companion, and we then and there began planning the trip for the next August. The Boston & Maine, and the Intercolonial Railroad Companies heard of our venture, and invited us to be their guests while in New Brunswick. This courtesy we gratefully accepted as we had much duffle to transport. Remote from the last outpost of civilization, about thirty miles from Peticodiac station, was a farm house where the doctor had stayed several times. The people gave us a most hearty and friendly welcome, and from there we made our start.

The journey into the back country required a specially trained team of colts and a unique buckboard. It looked like a high-sided church pew, boarded in at the back. Had it not been for this curious construction, the wild jostling and tipping and swaying would have landed everything, including ourselves, in the river; for the road led up the bed of the river to avoid the quicksands and quagmires on either side. During a

lifetime of traveling in strange ways, this turned out to be the most novel and thrilling. In the buckboard, besides myself, were the driver, the doctor, and my friend Robert Carels of Philadelphia. Not once were we able to get out of the bed of the stream, and while the buckboard was going forward, *the wheels were revolving backward* — a curious condition I had never come across; altho others have told me this same thing often happens with heavy wagon wheels on an icy road. The water was up to the bellies of the horses, and it was the heavy current of the stream that forced the wheels backwards in spite of the tremendous pull of our sturdy colts.

After about nine miles of this rough traveling, we emerged at the edge of a large pond and were immediately rewarded by counting thirty-two moose feeding peacefully upon the lily pads—but the king was not among them. The doctor had agreed to go, not only without a gun, but without tobacco and meat. Meat, like tobacco, deadens the sense of smell and we wished to keep our senses keen.

We unloaded all our duffle, food, and cameras, and the next morning the guide drove back to Peticodiac, agreeing to return in ten days for us. The following day we chose a lookout site where there were three tall trees in a triangle immedi-

ately at the edge of the pond, with a clear brook flowing by. We did not dare use hammer and nails for fear of frightening the creatures around us, so as quickly and quietly as possible, we cut poles and twisted withes. With these we constructed a crow's nest in the top branches of the three trees, hauled up all our belongings after us, and arranged a couple of poles out over the edge of the platform, directly over the brook, so we could lower our bucket for drinking water.

This all had to be done before sundown, when the moose come out in the greatest numbers. We took up our watch at about four in the afternoon. I had brought a bottle of asafoetida and I sprinkled it thoroughly over a large area before climbing the ladder. As all hunters now know, this was to kill the man odor.

Our tree-top quarters were very cramped, but we soon began witnessing such marvelous sights that all thought of cramp vanished. Caribou, deer, otter, porcupines, rabbits, foxes and other smaller animals began to pop up as though from out the earth. I knew from past experience that if we were high enough up, the creatures could not smell us; and as they do not seem to fear sounds they cannot account for, we could talk and make all the noise we wished. Ground creatures—the non-climbing creatures, do not look

high up in the tops of trees for trouble.

The first night it rained in torrents, but our ponchos kept us dry. The second and third nights were overcast; all night long we could hear great creatures sloshing about in the water, and the drip, drip, from the water of the lily pads in their muzzles. The days were foggy, and we could only occasionally see the outlined forms of moose. But the fourth day came clear and crisp, and from then on, thrill after thrill was ours as one after another the moose came out and posed for us. This gave us hope that the king might appear at any moment and we began grinding the crank of our motion picture camera. They would listen for a moment and then continue feeding.

A particularly fortunate opportunity had come early in the forenoon. A cow moose quietly stole out from the bushes to the edge of the pond, almost underneath our tree. She carefully scanned the beach both ways; her actions showed there was something on her mind, so we did not turn the crank, but waited. As quickly as she had come, she returned to the thicket and in a few moments came out bringing a calf with her, we judged about a month old. Together they entered the pond and began feeding. Meanwhile, we turned the crank and got some fine pictures.

This was the fourth day, and still no king.



SHE BROUGHT HER BABY OUT INTO THE OPEN POND



BABY MOOSE ONE DAY OLD

We talked for hours of the possibility of his coming, and I felt sure that if he was anywhere about he would sooner or later make his appearance. We could see by the size of the boards on many of the bulls, that a giant had been their sire.

The fifth night was full moon, not a cloud in the heavens. Before the moon came up we heard an unusual commotion in the pond below us, but could see nothing distinctly. As the great disc, looking as large as a cartwheel, came up over the tree-tops and cast brilliant rays upon the water, a sight met our eyes that almost stunned us. In the broad riffle of moonlight, standing up to their knees in the water, was a circle of nineteen bull moose, and in the center—the king—the hugest bull moose that probably the eyes of man have ever beheld. Towering over them, his magnificent head poised high, he gazed about him. The circle around him were watching him respectfully as their master. Strangely enough, they did not feed, but seemed as if holding a conference.

We feasted our eyes, and finally I looked over at the doctor. Great tears were flowing down his cheeks. "Thank God," he said, "I haven't a gun. I have killed my last moose—I have shot a gun for the last time. There stands the survival

of the fittest. Had I been successful in shooting that splendid creature, I would have felt like a murderer—I would have brought about the unsurvival of the fittest."

The circle broke up and they gradually dispersed and began feeding all over the pond. For an hour we talked and watched, straining our eyes to catch the last glimpse of them before the gathering mist finally hid them entirely, but we could hear them sloshing and feeding—drip, drip, all night.

The next morning we felt we had had enough and were preparing to climb down and break camp, when we saw a cow moose bring a wobbly calf to the edge of the pond. The doctor slid down the ladder and quietly crawled toward the calf. The wind was blowing away from the cow, and she did not notice his approach until he made a rush toward the calf. This startled her and she trotted away. To our amazement, she left the calf and as it did not move, the doctor rushed up to it, threw his arms around it and held it. Carels and I hurried down, hoping to get a close-up. Again we were to have a surprise.

We thought we had the secret well guarded as to the location of this remote pond and the salt lick close by, but there stood an Indian at the

foot of the ladder. The doctor was still holding the calf in his arms. The Indian looked at it and said, "One day old."

"How do you know?" we asked. Even the stolid Indian smiled as he looked at the comical baby moose.

"One day old, man catch him. Two day old, dog catch him. Three day old, devil can't catch him."



IN WASHINGTON D. C. AT 2 A.M. THE MORNING CHARLES E.
HUGHES WAS TOO HASTILY ANNOUNCED "OUR NEXT
PRESIDENT"

III.

VAUDEVILLE:
"THE PEOPLE'S ROSTRUM"

VAUDEVILLE: "THE PEOPLE'S
ROSTRUM"

DURING my recent engagement at that wonderful theatre, the New York Hippodrome, I was more than ever aware that the vaudeville stage offers educational opportunities, as well as wholesome entertainment. One of our foremost women educators and publicists called it, "The People's Rostrum", and surely she is right. Vaudeville audiences are among the largest and most permanent in the country, and they are not only readily amused, but eager to be instructed. What an opportunity! On the vaudeville stage, artistry and skill in unending variety—acrobatics, dancing, music, and drama, represent as true devotion to ideals as in any line of artistic achievement.

Back stage is not such a far cry from the forest, for on these vaudeville stages I find conditions that are congenial to my own habits of the woods—conditions I do not find elsewhere out in the world. In hotels, railroads, and even private homes, tobacco and other obnoxious odors, and not infrequently even uncleanness, such as cuspidors, are not unusual. System, punctuality and order are seldom the rule.

In the forest, in all nature, punctuality, order, and system are the very breath of life. The stars, the tides, the migrations of birds, the appearance of the herbs, the trees, the flowers are all on time, giving that sense of harmony felt, and rejoiced in by all. Back stage I find pure air in perfect ventilation, no tobacco, no bad odors, scrupulous cleanliness, system, order, punctuality—in a word, the perfection of organization, bringing quiet and a reposeful atmosphere in which to work.

In nature, each one attends strictly to his own business, no one interfering with another. So it is with the performers and players. To each is turned over this superb organization complete—equipment, orchestra, lighting. Everything is his absolutely, for the time being, and he can express himself, and give his message in perfect confidence that his every requirement is strictly and efficiently attended to.

The house manager and his assistants have the welfare of the public at heart, but the same courtesy and careful consideration received by the public, extend to everyone connected with the theatre, from the front entrance to the stage door.

Now a word about the personalities back stage—players and stage hands. The stage hands are all experts, each in his own line; no bungling, no inefficiency is tolerated by that kindly czar, the stage manager. It must be acknowledged that when such a standard is set and enforced, the character of the men and their work is of a very high order, and so I have invariably found it.

The motto of the players is, "live and let live." In no society have I met such kindly feeling, such friendly cooperation, such an absence of friction. Each one is keenly interested that the other's act, as well as his own, shall go smoothly and perfectly, for the success of one is the success of all. Courtesy and mutual consideration is the keynote. The harmony and warm friendliness existing throughout these theatres must be experienced to be appreciated.

All honor to the men who have worked with unflagging interest, courage, and perseverance to bring the vaudeville theatres throughout the country, to their present place in modern civic life.

"DO YOU LIVE UP THERE ALL THE
TIME?"

OFTEN during my matinees I find mothers with infants in arms and children in the audience. I am glad to see them, for I love children to the extent that I am not disturbed by them. Should a baby start to cry, I begin at once to chatter the Grobec (marsh bird) talk and the little one is at once all smiles. The disturbance is because mother insists that the child shall sit in a most unnatural, cramped position upon her knees, instead of allowing the dear little thing to wander in a perfectly natural way in the aisle.

One day I had a delightful experience. A mother allowed her little one to slide from her lap; instead of wandering back, it came on down to the orchestra, put its tiny hands on the rail and waited, looking up into my face as I stood there in my forest scene singing the bird songs. Of course, like all performers, I am blinded by the footlights and cannot see over them; but just then came a pause in my songs, and out of the silence piped a little voice, "Do you live up there all the time?" Instantly I answered, "Yes, my darling, most all the time, for if I am not here in this charming wood scene, I am in the

"GET A MATCH"

113

real woods in some part of the world."

This, of course, delighted the audience and left a very tender memory with me.

"GET A MATCH"

FREQUENTLY people from my audiences will call out asking a question, and I am always pleased to answer them. One time in Minneapolis during an evening performance, at the most tense moment, when I was rubbing my fire-sticks to produce a flame, a voice called loudly from the gallery, "GET A MATCH." Naturally some laughed. Without looking up, I said quietly, "Perhaps you would like me to answer you, young man, with a story." Although this rubbing is a most vigorous work, calling for all my breath, I kept right on—the audience became deathly silent.

I went on. "In northern Canada one winter, forty-eight degrees below zero inside a stalled train, we were waiting for the promised rescue and finding it hard work to keep alive. As the bitter storm raged, we saw to our astonishment a man in a bob sled, standing up, racing his horses madly across the frozen crust toward us. He pulled up beside the train and we let him in. He was unable to speak, sobs shook him, and he pointed to the sled. Someone gently pulled aside

the covering—on it lay a woman with two little children clasped close to her. All three were frozen to death. On the breast of the mother was pinned a little paper, "We have plenty of food and wood, but you left us no matches and the fire went out." Had this pioneer woman been taught as I was in my boyhood, to rub sticks for a fire, this tragedy could not have happened.

Telling the story, I kept right on with my fire-making, and at this moment the flame burst forth from my two sticks. I think I never received such prolonged and hearty applause.

THE EASTER LILY

IT has not been my pleasure to receive many bouquets over the footlights, but one experience was so unusual it touched me and I love to tell it.

It was in Seattle, Washington, at the end of the week. I had been told a certain old gentleman in the audience was much impressed with my act, and had "repeated" several times during the week. At the closing performance, Sunday matinee, which was Easter, I felt that something was happening across the footlights "out there," as the saying is back stage, and I hesitated for a moment. The orchestra stopped play-

ing and the house lights went up. I stepped close to the footlights and leaned forward so I could look across to see what was going on. There stood my aged friend with snow-white hair and beard, holding up to me a pot of tall, growing Easter lilies. Without a word he stood, handing up his gift to me, not trusting the usher in the usual way, to do this charming courtesy.

There was a moment of silence, and as I took the pot of lilies in my arms, speechless, the audience burst into applause. I came very near not being able to close my act.

RACHEL'S THEATRE PARTY

IT was not until I had reached manhood that I suddenly discovered one day that I could sing bird songs other than those of high-voiced birds. It seems strange that in boyhood I had not known this.

Some years ago I was seated in the marshes on one of the numerous islands in Lake Pontchartrain off the Gulf of Mexico, patiently waiting for the afternoon incoming of the grobecks, agrettes, terns and the numerous other kinds of marsh birds. My cameras were all set, but I forgot all about photography and began listening to what really seemed bird conversations. As they called back and forth, one to another, with their

raucous voices, I imagined they were telling stories to each other.

In a group of birds especially close to me, one became so bold that he almost touched my shoulder, and as he seemed to say the words, "Watch out, watch out," I suddenly repeated the same sounds with the exact quality and intonation. This not only surprised me, but the birds as well; and from then on every time a bird would say something that sounded like real words, I would say the same thing, and they would seem to understand and answer back. From that day to this I have often used this voice, and it has always greatly amused the grown-ups as well as the children in my audiences in the theatres.

But always the most embarrassing period comes to me when somebody says, "Oh, Mr. Kellogg, won't you sing a bird song." This invariably drives me far away from song; but should I be alone with children, my love for them removes all embarrassment, and in a few moments I will begin to talk as the grobecs, telling them how the birds in the marshes seem to talk in this funny way with each other. I have never yet found a child who failed to interpret what I was saying after a few minutes' conversation with them in this way, and they are so pleased and delighted they always want me to talk to them

with this funny grobec voice.

One Christmas season I was at one of those delightful house parties at Mrs. Lydia Avery Coonley Ward's in her charming home in Wyoming, near Rochester, New York. Among the children was a little six-year-old girl who was especially delighted with my grobec conversations, and upon learning that I was soon to appear at the Temple Theatre in Rochester, she said she surely would attend my performance.

She then asked me, "How much will it cost to get into the theatre?"

"Fifty cents, my dear."

Then said Rachel, "I think I will give you my fifty cents now, so I can walk right in," and she ran away and returned with the fifty cents.

I said, "No, Rachel, a better way would be for you to come as my guest," and I took from my pocket one of my cards made from a sliver of wood, and wrote upon it, "Present this card at the box office for two tickets," and signed it.

I gave the card to the child and said, "Now, Rachel, take this card to the box office and present it to the ticket man, and he will give you two reserved seats in exchange for this card."

She thanked me in her pretty manner and went away happy, but in a few moments she returned with a puzzled expression on her face.

She looked at the card and was evidently fascinated with its texture and my autograph, and said, "If I give him this card, will he give it back to me?"

"No dear, he will have to keep that card in exchange for his box office receipt."

She puckered her little brow and looked up into my face. "Well, I guess I will keep the card and pay my fifty cents anyway."

A few weeks later, while filling my engagement at Rochester, I learned that this same little girl was giving a matinee box party to her little friends, especially to hear me sing. Knowing that she was in the audience, I looked over the footlights up to the balcony, and saw in the box a group of children. Big bows of pink and blue and white ribbons stood straight up on their little heads, making them look like a flower garden. I inferred this was her box party; so when the time came for me to speak about the songs of marsh birds, and how they talked one with another—where one bird says, "Watch out, watch out," and another says, "What for, what for," and still another, "Come over here, come over here," I remembered the child's name was Rachel. So I said, "And one little bird said, 'Oh Rachel, Oh Rachel,'" and as I sang out with my bird voice, "Oh Rachel, Oh Rachel," she sprang

to her feet, threw out both her arms and cried at the top of her voice—"He sees me, he sees me."

This, of course, "broke up the show." The entire audience, laughing and applauding, turned and looked up to the much pink be-ribboned little girl standing with her outstretched arms in the balcony box.

A CRICKET ON BROADWAY

THIS story has gone the rounds of the press of the country with varying versions. I first told it to my vaudeville audiences many years ago.

One bitter cold winter night in New York, I was walking down Broadway with a musician, well known as a vocal teacher and master accompanist to the opera stars. We were at Broadway, 6th Avenue and 34th Street. It was eight o'clock in the evening and the crowds were jostling and elbowing into the theatres.

With the elevated above, trolley cars, automobiles, and the newsboys crying the evening papers, I suddenly heard a cricket singing. Grasping Mr. Luckstone's arm, I said, "Listen, I hear a cricket."

"Impossible," he answered, speaking close to my ear. "With all this racket you couldn't hear a tiny sound like that—besides, a cricket would

be frozen to death long ago on a night like this."

"I'll prove it to you," I said, and darted across the street, he following me.

Just opposite on 6th Avenue was a bakery shop. We went down the basement steps and I pointed. There, on the window ledge was the little cricket singing, walking back and forth, back and forth where the heat was curling out.

Mr. Luckstone marvelled. "What astonishing hearing you have."

"Not at all," I said. "It's a matter of attention—it is the way you are focused. Everybody has just as acute hearing as I have and I'll prove that too." I took a dime out of my pocket. "See this dime? It can't make nearly as much noise as a cricket."

When the elevated train was thundering overhead, I gave the dime a flip across the street. *The moment that dime touched the sidewalk, everybody for fifty feet turned to see who had dropped the coin of the realm*—where money is concerned everybody can hear just as well as I can.

IV.

THE SENSITIVE FLAME:
"A FORTY-MILE BLOW"

THE SENSITIVE FLAME: A FORTY-MILE BLOW

FIRE and sound are always associated in my thought, for I have been constantly working with one or the other ever since I can remember. When I was just a little fellow, home at Spanish Ranch, I watched the Indians making their fires by rubbing sticks; and wherever I have been among the natives of various countries I have collected their fire apparatus, for I wanted to be able to show this most interesting primitive process to my audiences. In the theatre, should I have a nest of shavings or punk in my hand in the usual way, in order to get the flame, it might be said I had some artificial means concealed to produce it. So I perfected a method of my own which I have used in all my public performances.

One hundred miles from a railroad, my early childhood in the high Sierra was lonely but happy. I lost my Mother very early and the Digger Indians and Chinese miners were my rough but kindly nurses. I was always preoccupied with birds and insects, listening to them and talking to them in their own language. I was fond of being alone in the meadows and forests, and I had never noticed that others could not do as I did. It was not until I was around sixteen or seventeen that I learned I was born with the gift of reproducing, in pitch and quality, the bird and insect sounds. Later I learned these were in the realm of high vibration, many thousands of vibrations above the human voice. It was perfectly natural for me to call the birds and creatures to me in their own tones.

The gift of the bird voice took me out into the world very young. Through Bishop Vincent, my public life began by singing bird songs at the original Chautauqua in 1890, and in this way I came in contact with the world of academic people. David Wood, of Philadelphia, a blind organist with super-acute hearing, well known as a fine musician, became much excited when he heard the bird songs. He determined to try to secure scientific evidence that my voice was truly the voice of a bird, and so must be produced by other

than the vocal chords. He took me to Dr. Benjamin Sharp, Secretary of the Academy of Natural Sciences in Philadelphia. This was a case they said for a physicist who was also a musician. Their friend, Richard Zeckwer, a scholarly musician and distinguished scientist, a student and friend of the great physicist Helmholtz, undertook the tests in his laboratory. They measured my bird voice with the Helmholtz tuning forks and found that the vibrations began at fourteen thousand per second, continuing on up into the inaudible. My human voice was perfectly normal and, like all human tones, way below four thousand.

So from boyhood, the warm friendship and interest of these wonderful men opened up the realm of sound in a new way to me through my bird voice, and helped me to intelligently study what I called woods radio.

It is well known that signalling with smoke is used by most primitive people, but it is not so well known how they communicate through long distances by sound. Nature has been their teacher and is still the best model. The woodpecker drums on the limb, and the grouse signals on the log; other birds and animals have variations of this method, while insects communicate through sounds produced in numerous ways. So

it has been natural for primitive man to imitate them.

My own experience with the Digger Indians at my home in the high Sierra taught me my first lesson in sound carrying. Among the miners and Chinamen there were always plenty of the Digger tribe around Spanish Ranch, and when anything happened of interest to them, they drummed on a hollow standing sugar pine, and the Diggers came in from the mountains for miles around.

Dr. Nansen told me the Eskimos, in certain places, knew of his coming many days before he arrived. It was incredible, he said, the way the news traveled from one icebound place to another in the Arctic lands. The Eskimo stoops over the edge of the open water and chants, catching the pitch or rhythm of the water.

In Maine, during the spring river drives on the Kennebec, log jams often occur. The noise of the rapids makes it impossible for the crews on opposite sides of the river to hear the loudest shouting. Each foreman has an Ojibway Indian beside him. He gives his orders to the Ojibway, and instantly the Indian on the opposite side picks it up and the crews work as one—and yet the white man has not heard anything. These Indians use what is called the whisper or echo

voice. Standing by river or lake they whisper to the water in a way known to themselves, and the vibrations are carried long distances.

The hollow logs, sound drums called "tro-cans," used by the natives of the Amazon in Brazil, carry messages forty miles or more, and the *lalis* of the Fijians are even more effective. It was authenticated that within half an hour after the notable Fijian regiment returned home from the world war, their arrival was known throughout the islands widely scattered over an area of several thousand square miles in the Pacific ocean. Of course, the best known instance of long distance secret communication among natives is the terrible story of the Sepoy rebellion in India.

Similar drumming methods of sending code messages through the forests are well known to naturalists. Many stories come out of the wilds about news traveling faster than by telegraph or telephone. The secret in all this is the instinct and understanding of pitch, of vibration through sound waves—in other words, tuning in.

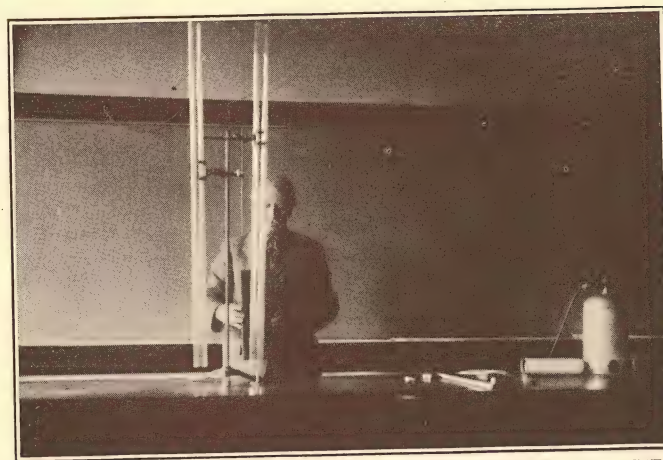
A book now out of print, "On Sound," by Prof. John Tyndall came into my hands. A physicist in Boston who had a splendidly equipped laboratory invited me to make experiments with the "sensitive flame," the name given by Prof.

Tyndall to a flame under pressure from a gas tank. The flame from the small tip cannot be affected by any ordinary sound made by the human voice. My bird voice not only made it "dance," as the agitation is called, but to the great astonishment of the physicist, extinguished it with a roar, proving conclusively that my voice was in the same realm of high vibration common to birds, insects, and animals, with the added power of human lungs.

From then on I experimented with sound, not only with my voice, but with tuning forks. I have had little schooling and no scientific training, so I had to rely on my woods lore to help me out. That is what made it possible for me to stumble on some secrets of vibration the physicists have perhaps missed.

It seems that to make this gas tip "sensitive," the opening should have a perfect taper, so I went to work to make one. In childhood I had a wonderful teacher in Father, in rough and original craftsmanship with tools of his own making and with nothing but his blacksmith's anvil.

I remembered Father in the old days mined the gold with which he made the wedding rings for the pioneer community. His craftsmanship was so good he could not bear a scratch on the gold, so he dipped a soft pine stick in water, and



DEMONSTRATING THE SENSITIVE FLAME BEFORE THE SCIENTISTS AT THE BUREAU OF STANDARDS, WASHINGTON



BEFORE THE K. G. O. MICROPHONE AT OAKLAND, CALIFORNIA



THE SENSITIVE FLAME APPARATUS

with powdered burnt umber gently polished the gold so that it shone without a blemish. In this crude way, with much patience, I made a taper so fine in a gas tip, no laboratory has its equal, they tell me.

I have had the good fortune to have many friends among the great educators and professors of the universities and colleges, and I have been often invited to demonstrate my discoveries and inventions in their physics laboratories, including the Bureau of Standards in Washington.

On two occasions this past year I was the guest of the General Electric Company in Schenectady where I was generously shown the marvels of that wonderful place, and in turn, I was very happy to give demonstrations of my apparatus and my voice before Dr. Whitney and the group of scientists working there with him.

My theatre audiences have always been deeply interested in the demonstrations of the "sensitive flame," and the quickest to catch the meaning of the low vibrations of the human voice, and the high vibrations of the bird and insect tones, suggesting to them, as it had to me, the world of inaudible sounds and vibrations all around us.

Then came radio, and the subject of sound waves became the preoccupation of all as it had so long been with me.

One day I suddenly conceived the idea that with my bird voice I could extinguish the "sensitive flame" through the radio. I wished, however, to prove it out before saying anything about it. The General Electric Broadcasting Station in Oakland, California, is not far from my home in the Santa Clara Valley, and I had long promised I would broadcast from there, giving them a half hour talk and some bird songs. So I set the date for the next week, August 19, 1926.

I then quietly planned with a friend in San Jose, forty miles from Oakland, to help me in the experiment. I showed him how to "tune" the gas flame, and I coached him in a series of code words and signals which I would send him over the radio. His cue was to be when I announced the call of the cricket. He was then to "tune" the flame—in other words, to turn up the flame to its highest point, about two feet. Before I left for the studio in Oakland, I set up my apparatus before his radio, and when I arrived at KGO I said nothing to anyone about it.

As soon as I had finished my half hour's broadcast, I sent out the code words to my friend in San Jose. I had hardly finished when I was called to the telephone, and my friend excitedly informed me that every one of my experiments had succeeded. *At a distance of forty miles, with my*

bird voice, I had extinguished through the radio a two-foot gas flame, and caused the tall, yellow flame to become a blue roaring bunsen.

When I told them at the KGO station what I had done, they were astounded and asked if I would be willing to repeat the experiments before the professors of physics at the University of California in Berkeley. Of course I was glad to do it and it was arranged for September 6th. They at once broadcast that these experiments were to take place on that date so the general public might listen in.

On the evening of September 6th, everything was in readiness and Prof. A. T. Jones, of the University of California, introduced me before the microphone at KGO in Oakland. He gave a short explanation of how the "sensitive flame" is affected by only the very highest vibrations, and that what I intended to do had never been done before.

In LeConte Hall in Berkeley ten miles away, a group of scientists and physicists, headed by Dr. Elmer Hall, were at the receiving end with my "sensitive flame" apparatus before them. The line was kept clear over the telephone so those in the hall in Berkeley could give the signals to me in Oakland, and report the results at once. Among other experiments I was to cause the

flame to dance (become agitated) and to again make the two foot yellow gas flame become the bunsen.

It was a great satisfaction to me when the telephone message came back from Dr. Hall and the other physicists that all the experiments had been entirely successful. Over the radio ten miles away, I put out the light several times, and made the bunsen several times. The professors sent their warm congratulations and there was a good deal of excitement at the studio, for history had been made and a new aspect of radio opened up.

Representatives of the Associated Press, the United Press, and other Press Bureaus, with their photographers, were in Le Conte Hall waiting until the scientists had authenticated the experiments.

The next day they sent out the story with pictures to all the newspapers in this and in foreign lands.

During my broadcast I sang the notes of many insects as well as birds. Some of the insect sounds were entirely inaudible to those closest to me in the studio. I requested the listeners-in to send me word if they had heard these sounds. Within a few minutes we were receiving telephone messages from neighboring towns and vil-

lages that the bird songs had come over clearer than speech, and the *inaudible insect voices were distinctly heard*.

For weeks following, hundreds of letters were received from places as remote as Alaska, Hawaii, and from ships at sea, reporting that the songs of birds and insects were plainly heard and enjoyed. But what interested me most was the astonishing fact that it had occurred to many different people, hearing me announce that I was about to put out a light with my voice, to hold candles and even matches in front of the radio and that these had flickered or been extinguished from the vibrations of my bird voice.

The letters were all forwarded to me by KGO, and gave me entertainment for many days. Some were touching and some were amusing. The letters tell of animals and birds and even insects becoming interested and excited on hearing the unusual sounds from the radio.

226 Clark Drive, San Mateo, Calif.
Aug. 20, 1926.

Station KGO. Dear H. M.:

Yes I could hear all the interpretations of different insects. I am a pretty fair housekeeper too but an insect I had never seen before kept walking up to the radio on the floor even after I had brushed it aside. It was at least one and a

half inches in length, apparently it was charmed.

We live in the country and several times during the night I awakened and right away I was alert to the call of a bird or an insect.

As to the mimic of the birds I can only pattern after you. There is nothing to say except that Mr. Kellogg is wonderful.

Yours sincerely,

(Signed) MRS. JOSEPHINE H. DEMENT.

Morgan Hill,
Santa Clara Co., Calif.

Dear KGO.

Let me tell you that we and some neighbors enjoyed Mr. Kellogg immensely last night. Even the cat too who went romping over the roof, over which the branches of a big oak hang. She really thought she'd catch the birds she heard singing through the radio.

You see our cat knows the real bird calls, for she's a country cat, and lives with country folks who too delight in all Mr. Kellogg so wonderfully performed. We all heard the insect calls and want to tell you we thank both Mr. Kellogg and KGO for a splendid evening.

DOROTHY G. KYLE.

Hilo, Hawaii,
Sept. 15, 1926.

Announcer
Radio Broadcast Station KGO
Oakland, Cal.

Dear Sir: Your programs are so different

from practically all the others that they are decidedly refreshing. I have been particularly impressed with the part Mr. Kellogg, the Bird Man, has taken. For instance, I have not heard the cry of a loon since I was a small boy, and I have often said to my wife, (I am 55 years old now) How I wish I could hear the cry of a loon again, it seems to me I want to hear that sound more than any other sound in the world. So when I heard Mr. Kellogg giving the cries of different birds, I listened breathlessly for the cry of the loon, and, sure enough, it came. It was just what I had wanted, it carried me back to the days of my childhood as nothing else could have done.

I dare say you may think me foolishly sentimental, but that is the way I have felt. All the bird cries he gave were certainly wonderful and I wish you would thank him for me.

I want to assure you that your station is a prime favorite here in these Hawaiian Islands. We can get you every time here in Hilo, sometimes beautifully, other times not so good, owing of course to differing conditions.

From yours very truly indeed,

G. H. CANN,

P. O. Box 531, Hilo, Hawaii.
Aguila, Ariz.
August the 20/26

Mr. KGO
Oakland, Calif.
Yours truly:

I don't have much larnin and hits kinder hard

muckin to spill what I has to says on paper, bein as paper is ruther scarce out hear tew-around these hear diggins how sum ever you seys writ so hear hit is. Myself and family which counts, one parrot, one dog, hound, one desert canarie bird, one half breed cat and myself, we all live together in a one room shack away out hear on the sand and sage, 20 miles from no-a wheres which haint no wheres. What few neibors we have air scarce, and not on speekin terms account there different nations and breeds, how-sum ever Mr. Rattlesnake don't hitch with Mrs. Gila Monster and Mrs. Coyote don't like them other 2 nohow, and we don't agree with any of them tother so thars no hitch. Well tother day up drives a one horse flivver to the shack and a stiff axes about crassin the river to Californy. Seys I it costs \$2.50 to cross on the ferree which he didn't have—seys he, can you all len me \$2.50 on my radio? Whats a radio seys I? Seys he, hits a box what sounds ketched in the air come to yew — seys I, that lisens gud, trot him out, which he does. After foolin around a heap putting wires on a greaswood and shack, he tuns 2 door nobbs on the box and sounds cum outen a harm like a lot of sand hittin the wire. Seys he yew just turn these nobbs this a way and tother way until you all git sumtin. Then he moasies down the pike. Well after tri-in a cuple days and turnin the nobbs this-a way, and that-a way, I hears nuthin but a sandstorm. The parrot says "stung". So be it. Well last nite I began agin turnin nobbs, when wholly makeral, a lot of birds

began to sing in that thar horn — my canarie joined in, when me parrot hollered cut it out, cut it out. Its bed time. This racket woke up the cat who mossied over toward the horn, and began rustlin for a square meal on birds. Purty sun the cat tried to crawl in the horn, which fell on the floor, causin the dog to take after the cat who ran outen the shack into the arms of a gang of coyotes, who had been listenin-in. Well the coyotes got the cat and whipped the dog. All this time the parrot was hollerin "help" help. I started to pick up the horn when it, the horn seys "Yew have been listing to Mr. Kellogg imitatin bird songs. He is nationally known as the Nature Man. If you all are pleased just writ to Mr. KGO, Oakland, Calif. and tell him all about hit. Now dear Mr. KGO please tell Mr. Kellogg the next time he all whistles, please notifi all consarned, so we all can move our animals and oter critters to other pastures so they won't mess up a heep o truble.

Years for ever

W. J. YOUNG.

V.

FIRE AND SOUND IN FAR-OFF FIJI

FIRE AND SOUND IN FAR-OFF FIJI

I N the spring of 1925 I decided to go to the Fiji Islands and see if by some good fortune I might witness the marvelous demonstrations of the islanders of M'Benga. I had heard of the "Fire Walkers" there and their astonishing control of fire, also their method of communication over long distances by the *lalis* (pronounced "lallies"), their sound-signalling drums.

When I made known my intention of journeying to the South Seas, I received a cable inviting me to make my first stop at one of the beautiful island homes in Honolulu so famous for its hospitality. I was met at the steamer by my kind host and hostess and taken to their home on the Pali road overlooking a magnificent panorama.

The very next day a *luan* had been planned for me. The house had been the home of one of the Hawaiian royal family and I was told the *luan* would be prepared by the natives that had served there during the life of the owner.

My gracious hostess gave me the opportunity to see the preparations from start to finish for this most interesting native feast which is truly a novel affair. It was served without silverware, in the genuine beautiful old Hawaiian wooden bowls of every size and shape, and the variety of strange delicious foods seemed endless. The native dishes were all placed on the table, and the exotic flowers and wreaths made a gorgeous picture. Hawaiian singers added their lilting harmonies to an enchanting evening.

The tropics are often uncomfortable on account of the humidity, but the never-too-warm atmosphere of Honolulu was a delight every moment I was there. Parties and outings crowded the following days and I felt loath to leave such true friendliness and generous hospitality.

While there I heard more about Fiji, especially about the *lalis* which they said were jealously guarded by the natives and not allowed to get out of the islands.

At the office of the Steamship Company in Honolulu when I asked for bookings, I was much disappointed when they said no passengers had landed at Fiji in eight months because the islands were in quarantine for typhoid; but they said I could take a chance, and if I could not land I might continue on to New Zealand and thence

to the Solomon Islands. I took the chance and sailed in early May for Suva.

Nearing the island of Vitilevu, a wireless came from Suva, the capital of Fiji, that the quarantine was lifted. This greatly rejoiced our captain for he could take on fresh water, and I was very happy over this piece of good fortune for myself. There were only two other passengers for Suva, an Australian and his wife who had lived there many years and were returning from a trip to the United States. I was the only visitor. The dock was thronged with natives, a sight I shall always remember—such magnificent physiques, such heads of hair, such upstanding dignity and poise. The presence of many Indians (Hindoos) was somewhat of a shock; their thin, puny figures were a sad contrast to the physical beauty of the Fijians.

Porters took my baggage, and the native custom officials who could speak English said I could get comfortably located at the hotel and at my convenience return and have my luggage examined.

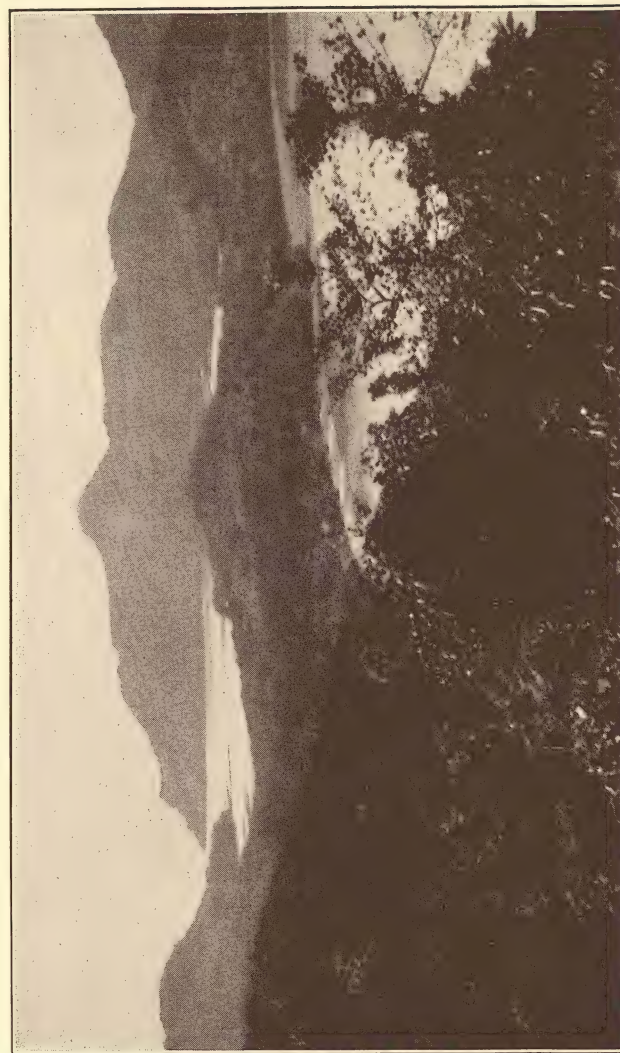
The moment these natives spoke I had a pleasant surprise, their voices were so perfectly focused, resonant and musical. I realized I would have a great treat in listening to their songs. The proprietor of the fine modern hotel greeted

me and I was given a delightful room overlooking the bay. The island of M'Benga, my goal, was clearly visible on the horizon, so they told me.

Mr. and Mrs.——, the friends I had made on shipboard, invited me to call; they kindly said they would introduce me to some of their friends. It seems there are two circles in the islands, the commercial and the governmental.

I arrived at five o'clock Sunday afternoon, and at seven o'clock in the evening from the porch of the hotel, I heard from several different places the sound of strange drumming. I made inquiries and learned they were the *lalis* being drummed announcing the church services for the evening. I was disappointed for I had expected a booming resonating sound. However, I thought it might be because I was in a bad position to catch the sound waves and I hoped I might hear better some other time.

My first thought on waking early next morning was that I had gotten away from that annoying tea serving habit on the English ships, and I would now have a good cup of coffee for my breakfast. It was five-thirty, and what was my disappointment when a soft-footed Hindoo brought to my room the usual tannic beverage always associated with the British.



THE FAR OFF ISLAND OF M'BENGA INHABITED ONLY BY THE FIRE WALKERS OF FIJI

"Breakfast?" I inquired of the beturbaned bundle of silence.

"Yes sir, at nine o'clock, sir."

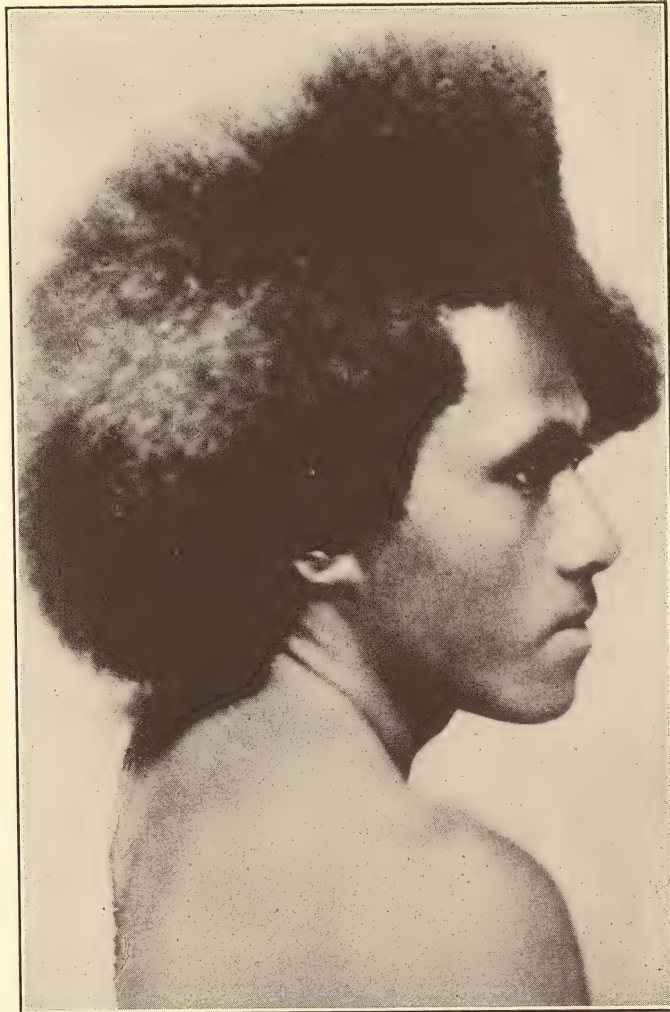
Three hours to wait; so I sauntered out and feasted my eyes on the most magnificent human creatures I have ever seen. I greeted each one with a "Good morning," and in return heard their beautiful voices. I soon learned that it was only the men who possessed this marvelous vocal tone. It was entirely absent in the girls and women, but in even the small boys I noticed its beginning.

After breakfast I had a talk with the hotel proprietor who of course wanted to learn my business. "To visit the different islands and study fire and sound," I answered. Ah, that might be possible. Had I the proper letters to the Governor; no one was allowed to visit the natives, not even were the natives themselves permitted to visit from one island to another. It would require some time to get an audience with the Governor, but surely he could make me comfortable at the hotel and would gladly introduce me to some interesting people. A naturalist was always a most welcome visitor to the islands. I thanked him and started off to explore.

About ten o'clock I walked down the long



A FIJIAN COMB



THIS HEAD OF HAIR, LIKE SEVERAL OTHERS I MEASURED,
WAS THIRTY-SIX INCHES IN CIRCUMFERENCE

main street to the business section of the town. There I was presented by my ship's companion to several business men who offered me the hospitality of the club, and said they would do their best to furnish me with proper introductions to the Native Department, the Colonial Secretary, etc. I tried not to become discouraged, but the thought of having to wait many days in a modern comfortable hotel, instead of sitting on the mats with the natives in their huts, was a sad outlook.

As I was returning to the hotel I was about to pass a distinguished looking Britisher, when he saluted me and asked me if I was not the passenger who had landed from the Niagara the night before. He said he was the Mayor of Suva, and he extended to me the courtesies of the town and added he would enjoy entertaining me at the club. He had heard I was a naturalist and would want an audience with the Governor. The Governor was absent just now but the Colonial Secretary was a charming gentleman and he was sure he would be glad to further my interests. He parted from me with a cordial handshake, saying nothing could be done about it immediately, but he would see me later. This putting things off did not suit my American ideas. I was grateful for all the cordiality and the good inten-

tions, but I felt sure I could do better by going ahead by myself. I have never used letters of introduction in my wanderings, so I started on.

As I looked up the hill I could see groups of buildings with verandas extending completely around them, so I went on up, and as soon as I saw a sentry on duty I knew they must be government buildings. Over the steps leading to a second story veranda I saw a sign, "Native Department." No one seemed to be about, so I knocked at a latticed door. It was opened by the handsomest young Fijian I had yet seen. He had on a neat print shirt and a pure white loin cloth, bare legs and feet.

"I am interested in *lalis*," I said. Can you tell me to whom I might apply to find out something about them?" He answered me in the most beautiful English and asked me to come in.

I entered a sort of office and in a moment a crisp, soldierly young Britisher came in looking very much puzzled, but friendly. "*Lalis*? Why, Mr. Boyd, Chief of the Native Department, will surely be the man for you to see. He has lived here a lifetime and knows more about *lalis* than any one else around here." Then, very courteously, "Won't you step this way." He opened the door into another office saying, "Mr. Boyd, here

is an American gentleman who wants to know about *lalis*."

Just at the moment I entered, a native, kneeling, was in the act of handing him a cocoanut cup. Instantly, without the formality of a greeting, he took the cup from the native and handed it in the most gracious manner to me, saying, "Have you had the pleasure of tasting *kava*, our native drink?"

"Not yet, thank you," and I drained the cup. It was well I did it quickly for it was like liquid quinine. I smiled my thanks, for he looked at me with a twinkle in his eye, knowing just how I felt; but he seemed to enjoy his own cup mightily.

After recovering from the bitter sensation, I blessed the intuition that had turned my steps toward the government buildings, for in Mr. Boyd I found a real *lali* enthusiast. I told him I had heard them being drummed the evening before, and furthermore I told him they had lost their resonance and were useless to project sound any great distance; in other words, they were out of tune. He looked very much interested and said, "You must have had a good deal to do with the *lalis*; may I ask where you have known them?"

I replied I had never seen one. He seemed too



THE RANKS OF SINGING CHILDREN



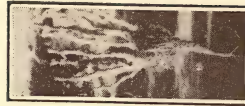
LEAVING M'BENGA

astonished to speak, and got up and opened a door on to the veranda. Pointing, he said, "There is a *lali*."

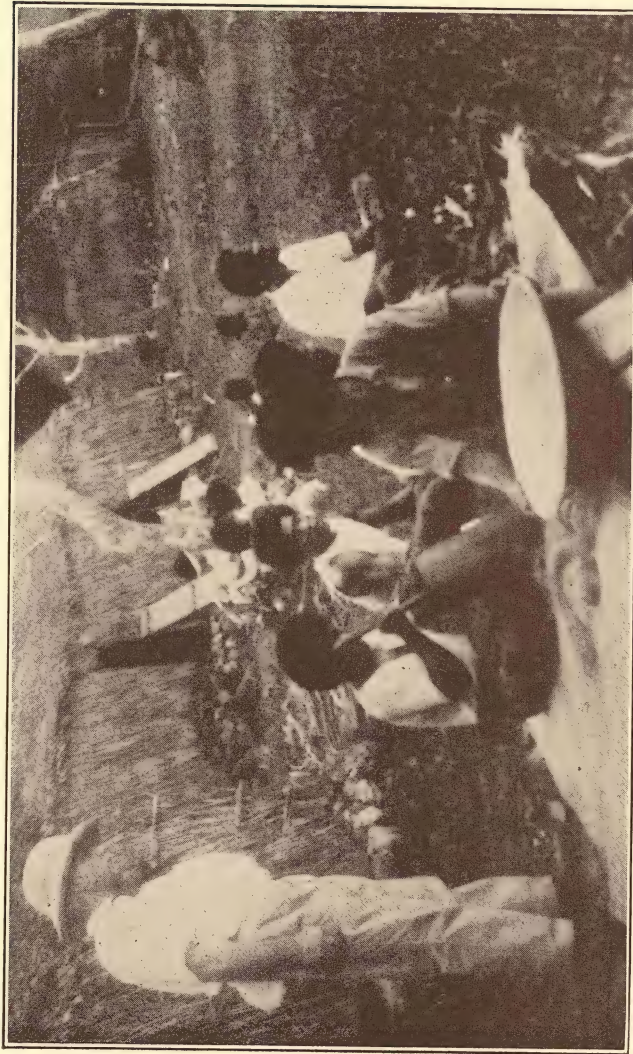
My first glance showed me just what I had pictured. It looked like a giant log watering trough, only instead of the wide place gouged out for water, there was a narrow slot. I went out on the veranda to examine it and Mr. Boyd followed.

Looking at me curiously, he finally said, "Won't you tell me how you know this about the *lalis*? I have noticed those around here no longer have the same booming sound they had when I first came to the islands, and no one, not even the natives, knows why."

I showed him where the sides were worn down from the heavy drumming. The edges had deeply worn grooves, spoiling their symmetry. I explained that their ringing sound comes from their perfectly proportioned shape, and I said I felt sure I could bring back their resonance. Mr. Boyd became more and more interested. I asked for a couple of pails of water which a native brought at once. When I got a sufficient amount of water in the *lali* I took the heavy club and struck a smart blow. Boom! Out sang the splendid sound. Mr. Boyd was delighted, and from all about, natives seemed to appear like magic; some



YAQONA BUSH



PREPARING THE YAQONA (KAVA) CEREMONY



A KAVA BOWL

bent themselves as though they were bowing, and cupping their hands they clapped with a hollow sound three times, a sort of salute as I afterward learned. Others stood erect, their fine dignified figures towering over us. They were chiefs of the various islands and Mr. Boyd presented them to me. They could not speak any English, but they all smiled at me and shook hands.

When we were again alone in the office I told Mr. Boyd how much I wanted to see the native life, and above all to see the Fire Walkers on the island of M'Benga. He told me there had been no Fire Walking ceremony for some years, very few had ever witnessed it, and he thought it altogether out of the question. I explained I had studied fire and sound for many years and that I would be glad to give a demonstration at once if he would arrange for a hall or auditorium and invite the native chiefs and the government officials. I did not tell him so, but I hoped in this way to hurry things along and I might perhaps be given permission to visit the other islands right away. He hesitated and smiled. I saw the "at once" rather took his breath away, but he was most courteous and said he would be delighted to arrange it. "For—for next week if possible?" and he looked questioningly at me. However, I suppose my enthusiasm must have

helped matters, since he finally arranged it for that very same afternoon at four o'clock.

Mr. Boyd then telephoned to all the government departments, arranged for the hall, and sent out a runner to the native chiefs. But first of all he telephoned to the Commissioner of Education, the Hon. David Hoodless, who came at once to the office. I wish I could sound trumpets before writing his name. I found in him one of the most wise and kind and lovable friends I have ever had. He is an Oxford graduate who came out to the islands twenty years ago. He speaks the Fijian language fluently, having lived six years on a far away island quite alone with the natives. He has a genuine love and understanding of them and they love and revere him.

It was Dr. Hoodless who escorted me to the government school auditorium, where promptly at four o'clock a large audience had gathered, including the Colonial Secretary, the Chief Justice, the Colonel of the Fiji Military Force and other officials, and a number of native chiefs.

I had brought with me all the apparatus I use in the theatre for a full evening's performance—a fifteen foot tank of compressed gas and the glass tubes necessary for my "sensitive flame," the name given by Prof. Tyndall to a gas flame under pressure. My ability to produce vibra-

tions inaudible to the human ear causes this gas flame to "dance" and "sing". It responds to my bird voice, but cannot be affected by any ordinary sound, even shouting, of the human voice. I also had my rubbing sticks to produce fire by friction in my own way.

When the time came for my musical numbers, I said I would be glad to sing the bird songs with piano accompaniment if someone would play for me. A young man stepped quickly to the piano and said simply, "What would you like me to play, Mr. Kellogg?"

"Do you know Nevin's 'Narcissus'?" I asked.

Hardly was the name out when he started in and played with such brilliancy and musical feeling that I sang with perfect freedom.

After the performance I felt I had made many more friends, for it was arranged to put a government launch at my disposal the next morning and for Dr. Hoodless to accompany me as interpreter. I was amazed and delighted at the pace things were moving my way, for in the morning it had seemed that for weeks I was likely to be blocked by British formality. But now apparently every one had dropped his own business to further mine.

To visit M'Benga, the Fire Walking Island, at such short notice was impossible they said, as it

was twenty-four miles across the open sea outside the reefs, and the big government boat was away on a long cruise. So Dr. Hoodless planned a shorter inland river trip in a small launch to the native villages on the island of Vitilevu.

It seems that to visit M'Benga, permission must be had not only from the Fijian government, but from the native chief of the island. On that island are most carefully preserved the primitive habits, customs, and original ways of living of the Fijians, and everything there they assured me was unspoiled and untouched by any outside influence. It is the only place in the islands, and one of the few places left in the world, where "Fire Walking" is still practiced. I was told no one, not even the natives from other islands, was allowed to land there; so I was astonished when they said word had just come that I would be a welcome guest to mysterious M'Benga. Why I had been so favored and how word had been received so soon from across twenty-four miles of open sea, I did not understand until after I had been there. I was grateful for the preliminary river trip but my heart was more than ever set on the Fire Island.

The rest of the story follows in a letter I wrote home recording the events while they were fresh in my mind—the river trip, and afterwards the

never-to-be forgotten voyage to M'Benga.

About June 3, Fiji Islands, South Seas

Surely it's far far away, and I am blessing the kind fate that has brought me to this most wonderful land. There are two hundred and fifty islands, eighty of them inhabited, I am told. I am seated in a grass hut in a native village on the largest of the islands. The natives are sitting all around me as I write; silently they watch and wait, for I am the Big White Fire Chief, the name given me by the chiefs who witnessed my performance in Suva.

I am waited on hand and foot and fed like a stuffed duck in a cage, and they cannot bear to have me out of their sight a moment for fear of missing something. The government of Fiji (Native Department) has sent me up the large river in the island of Vitilevu which is navigable sixty miles. Dr. Hoodless and a native chief who can speak a little English are with me. The evening before, they dispatched a runner to announce to the chiefs in the different villages that I was coming.

We left Suva for the river trip at eight in the morning, and at noon we made our first landing at the village of Rewa. The chief and all the inhabitants were on the bank of the river to

meet us. Mr. Chief, with his English coat and walking stick, a loin cloth and bare legs and feet, presented an amusing sight, yet his greeting and kindly face spoke a warm welcome. Our boat was surrounded with natives all trying to carry the luggage.

We were led through a narrow path in the jungle and came out on a wide opening; fine tall grass huts circling it, made it look like a village green. We were at once ushered into a large new grass hut, beautifully patterned mats on the floor, woven platters of tropical fruits all about, and hanging from the rafters, bright colored flowers and vines.

I was shown a special mat, so I sat down upon it and they all gathered about me, all seated. There were twelve inside the hut and many natives outside. We looked and smiled at each other while the interpreter told the story and in return translated their welcome to us.

Soon two natives rose and went out—Mr. Chief and everyone looking solemn. In five minutes they returned with a sort of bush, roots and all, and laid it at my feet with the roots extended toward me. I waited and wondered. Then it dawned upon me it was the roots of the famous *yaqona* bush from which they make the *kava*, their native drink. A freshly dug *yaqona*

bush is presented to an honored guest with the roots always pointing toward him. All began clapping their hands slowly three times, cupping them so they made a deep hollow sound; then followed a chant, and at the close, each man repeated something as he looked toward the bush. They cupped their hands and slowly clapped three times, and each time this was preceded by all together giving a long drawn out chanting note, something between a deep hum and a moan, ending abruptly with a sort of musical grunt.

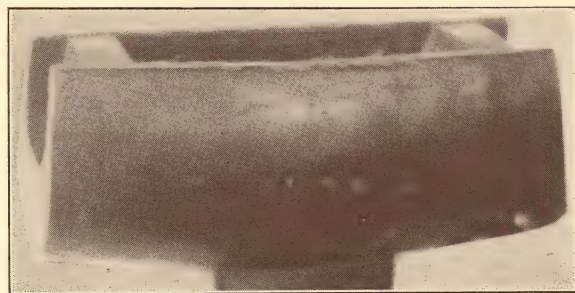
At the close, a boy entered with a section of a log, the top of which was hollowed out about six inches, making a mortar. The roots were placed in it and with a hard wooden pestle were pounded and crushed to a pulp. Another native brought in a beautiful shallow bowl, three feet across and about six inches deep, with four legs, all carved out of one piece of wood. Into this they put the ground roots from the mortar—more chanting. Another native sat before the bowl while water was slowly trickled in from a hollow bamboo tube; next he kneaded it until it was thoroughly mashed, and then a large quantity of water was poured on until the bowl was full. Finally he took what looked like a bunch of cocoanut fibre and swirled it round and round, gathering in it all the gritty particles of the



KAVA CEREMONY



BEATING THE GIANT DRUM "LALI"



A "LALI"

mashed roots; then he wrung it out in the bowl, and turning, shook out on the mat the particles that adhered to it. This he did again and again until the liquid was entirely cleared of even the tiniest specks.

Just here a young girl entered in the curious, respectful half stooping attitude and held a cocoanut cup over the bowl. She held the cup in both hands, her arms stretched straight out; the server dipped the cocoanut fibre, which acted as a sponge, into the liquid and deftly squeezed the cup full. In the same characteristic position, half kneeling, half stooping, she offered me the cup. All looked at me in utter silence. I drank it down quickly. Dr. Hoodless had coached me what to do, so I said, "Manaka, manaka," and threw the cup in front of me, giving it a sharp twirl. Next, the chief was given the cup, and in turn all the twelve others did exactly as I had done, saying, "Manaka, manaka," and twirled the cup.

I cannot describe the charm of this solemn ceremony, but in spite of the deep musical resonance, the chant had a strange savage sound, and followed by the hollow hand cupping, I felt my blood tingle with excitement.

More silence. Then another boy entered placing before me a fine mat. Other natives fol-

lowed bearing two roast chickens perfectly cooked; then a delicious turtle soup. Then came a twelve inch bamboo tube with green leaves sticking out of the end; the leaves were pulled out and in their folds was a steamed land crab in cocoanut milk; it too was delicious. Next came fried mullet, and blessed be, my old friend of the West Indies, yams, nice and mealy. I poured chicken gravy on and my, Oh my! how good it was. Then taro root, good too, shrimps cooked in cocoanut milk, really great. Then my prize of prizes, tiny bananas, the kind never seen out of the tropics, fragrant and sweet as honey; and don't let me forget the bread fruit served on its own glossy leaf. Luscious, juicy pineapples, papaya and huge mandarines closed the feast. It was good I was seated on the mat for I just rolled over, and I am sure I looked as I felt—stuffed. All this time the chief and his next of kin sat watching me. I could not get them to eat, but later I found they had eaten.

After resting awhile I heard a bird singing, not unlike our mocking bird. The chief said, "Honey;" then I knew it to be the famous honey bird that shows the natives where the bee trees are; so I sat up and sang, repeating the bird's song. It was like an electric shock. The solemnity was all gone and they became like

children in their pleasure; they fairly roared with delight and cupped their hands. I sang again and they rolled over on the mats clapping and laughing. Evidently the interpreter had told them of my power to sing bird songs and I longed for my singing flame which I had left behind. Nevertheless, as a large gathering had banked themselves about the doors, I signalled for them to come in; in they came and when all were seated I sang a number of bird songs. Each time they clapped and roared with delighted laughter. But the climax came when I ended by singing Grobec, chattering and talking in the droll voices of the marsh birds. What a tumult! The news had spread like fire and they kept piling in, begging for more, but as plans had been made for me to spend Sunday at Nakelo higher up the river, we left at three o'clock with six bearers, and the entire community escorted us to the edge of the village.

We walked about five miles when we were met by a fine looking chief who had come to welcome us and accompany us to his village. We emerged from the bush into a beautiful open green like the one we had left, surrounded by tall, splendid looking grass huts.

The chief took us at once into the largest one. It was very high and so lofty inside it looked to

me like a Fijian Westminster Abbey. The frame was made of bamboo and hard wood and the roof was massively thatched; not a nail in the building. All the uprights, rafters and cross timbers were tied together with native material which is called *sennet*, and is made of cocoanut fibre braided into ropes, cords, and strings of all sizes, and used for every imaginable purpose; it is as strong as hemp but much more flexible and delicate in texture. All over the floor were fine plaited mats with patterns in black and white, and woven in the fringes were brilliantly colored bird feathers. Preparations for our coming were evident everywhere—fruits, flowers and wreaths.

The chief in a most dignified manner pointed to special mats for us. About forty splendid looking men entered in the usual silent, quiet way and seated themselves in a semi-circle. There was never any talking among themselves on these occasions. Presently the same *yagona* ceremony with the bush was repeated and then the same feast, food enough to feed me a month, and served again by a handsome boy, always approaching me on his knees. I noticed that whenever the natives, other than chiefs, entered a hut or came near us or near a chief, they invariably bent themselves, half kneeling, half stooping, and cupped their hands three times. The boy

had on a loin cloth and the usual dress up bit of shirt. Later I measured his hair; it was fully thirty-six inches in circumference and eleven inches deep—beautiful. All again watched me eat, but I was too full to sing so I just rolled over on my mat and enjoyed the sensation.

At seven o'clock in the evening the population of the world began to gather around the hut and I realized that something was about to be staged; the strangest most weird drumming was heard in all directions. They use their large *lalis* to call the people together.

I sat and listened and watched. In came a group of men in their loin cloths, their bodies shining with a heavy coat of fragrant oil (sandlewood and cocoanut, I learned afterward) each one a subject for a sculptor. They sat down before us; following came a group of drummers with small clubs hollowed out in the center, called *ua ua*, and placed themselves at the back. Then began such drumming and such singing! Next came the motion dance, all seated, waving their arms, swaying and moving their bodies; tableau after tableau melting from one beautiful, graceful pose into another for two hours, and always their strange hollow clapping with the singing. At ten o'clock they gradually dispersed. But, oh, yes—before that I sang and

sang and the same hilarious time was repeated as in the afternoon.

At eleven o'clock two girls came into the hut, prepared a mosquito screen over our mats, and quietly withdrew without a glance in our direction. The chief solemnly shook my hand and left, while I lay awake thinking. And were these the so recent cannibals that I had been warned might still be bloodthirsty! And then I fell asleep.

I was awakened early next morning by the soft patter of naked feet on the mat. There stood a native with a woven grass mat tray in his arms, and upon it a cup of coffee and a basket of fruit. He placed them by my side and softly went out. At the hotel in Suva and on shipboard I had had horrible concentrated sweet lye for coffee, so I was prepared for anything; I tasted the native concoction, and to my joy, it was delicious—real coffee. They had grown it right in the village and had roasted it themselves. The sugar was brown, crystalized.

After dressing, I was visited by the chief who said breakfast was being prepared, and in about an hour a banquet was brought in—full roast chicken, coffee, bread fruit, yam, taro, then fried mullet, ending with papaia and mandarines and always my favorite honey bananas.

I stood in the doorway of the splendid hut assigned to us looking at the magnificent village green that spread out before us; in the center was a gigantic banyan tree; from every side trails led into the green like the spokes of a wheel.

About two o'clock I heard drumming, drumming, drumming, and from the fathermost parts of the island the clans gathered again; from all directions they came, men, women and children, and little naked children were popping up everywhere from out the grass and bushes. Three benches were placed beneath the immense banyan tree and I knew that again something was going to happen, so I got out my motion picture camera and shortly afterwards all the natives seated themselves under the tree. More drumming, more agitated drumming, and more rumbling; everyone under the tree became deathly silent. The chief invited me to the bench; two big chiefs sat one on either side of me, and then it began. Two by twos and four by fours, groups of decorated natives came forward, seating themselves before us; finally appeared a group of wreath-entwined women, bodies glistening with oil, and about their necks and shoulders were draped gorgeously colored, sweet smelling flowers and vines. They seated themselves in front with their backs to the drummers.

Chanting, weird chanting, tom, tom, tom, incessant drumming. Then all in chorus, the most beautiful singing. And then the motion dance of the evening before was repeated. Fijians do not stand to dance; they are always seated close together, cross legged, and with their arms and bodies, weave themselves into beautiful poses, no two alike.

For two hours these rhythmic motions and graceful gestures in unison kept up. I hardly had to be told that no two movements were alike and none repeated, for it was never monotonous; and the singing of those deep wonderful voices rose and fell, sometimes sweet and melodious, sometimes wild and exciting.

I had the motion picture camera focused and set, and better still, my camera worked with a battery, so all I did was to push and lock the button, and without the natives knowing it, the pictures were taken.

After the dance I was shown about the village. I saw their *lalis*, and I took their pictures drumming the great old cannibal *lali*. They showed me their mat weaving with the specially long palm leaves grown for that purpose, and many other of their ways of handicraft.

Upon learning from the advance runner of

our coming, they evidently felt sanitary arrangements should be made for my comfort, so they had woven a beautiful little out-building and covered it with vines and flowers.

I noticed here and there a rooster tied and soon discovered why. The poor thing being tied would struggle; this would attract the wild chickens and they would begin to fight. Meanwhile, one of the boys stealthily creeping up would grab the unsuspecting fighter by the legs. Then I knew where all my roast chicken was coming from! Sure enough, at noon time two more roast chickens were part of the feast. We always ate alone. I never knew when the natives ate, for they have no regular hours and no common meal time.

Late that afternoon we walked about three miles higher up the river where the launch met us and we returned without delay to Suva and began the preparations for our visit to M'Benga. Everyone in Suva told me not to expect to see the Fire Walking ceremony, it was so rarely done. But somehow the invitation mysteriously sent me at Suva gave me hope. I was delighted Dr. Hoodless was to go with me, and through him I chartered a cutter, the "Jan," forty-five tons, manned by natives. She had two masts

and an auxiliary motor and was licensed to go outside the reefs. I could hardly wait for morning to start.

It turned out a beautiful day, having rained the night before. "Tropical heat" does not describe the climate of the islands. I never once suffered with the heat, and from April to November I understand this delightful temperature prevails. As for the rain, it never troubled me—a contrast to the discomfort and even hardship I have experienced with the downpour and winds in Labrador and Newfoundland, sometimes lasting weeks.

Our four hours' journey over was a joy, and at noon we were served a native meal on deck, which was most delectable. On nearing the island our sailors climbed the rigging to a dizzy height and took the watchout, signalling to the captain the way to steer between the coral reefs, a most exciting experience.

As we approached the island, not a hut, not a soul in sight. The mountains rise abruptly from the water and at this place there was practically no beach. We had with us a Fijian who had been there a long time before and he evidently expected to find a village there.

It was the heat of the day and we supposed if there were huts concealed in the bushes, the natives might be sleeping and we were approach-



THE "JAN"



AS WE APPROACHED—NOT A HUT, NOT A SOUL IN SIGHT



ALL WERE EAGER TO HELP



I WAS CARRIED TO THE SMALL BOAT

ing unobserved. We finally anchored quite a way out and then our small boat was drawn up and we piled in with our luggage—cameras, gas tank, and all the apparatus I use in the theatre. As we approached near enough we saw movement in the bushes, and upon closer examination we saw what seemed to be an arched canopy of vines, ferns and flowers, but still no one visible.

The water was so shallow we could not reach the narrow beach even in the small boat, so our natives jumped out and asked us to climb on to their backs, which we did, and were carried ashore. As our feet touched the ground the most heavenly singing began, and out from the thickets that lined the water's edge came a tall, handsome chief who greeted us in a most dignified and friendly manner. Through an opening in the bushes he led us into a clearing where several hundred men, women and children were assembled—the whole population of the island, we were told. They were a magnificent group; every one of them of splendid height, the men well over six feet, and the women full six feet, all with fine and dignified bearing. They had on the usual loin cloth of tappa, the native cloth made of bark pounded and stained in patterns, and in our honor, short white upper garments.

The children, about eighty of them, were

drawn up military fashion in two ranks, all looking straight ahead, not one of them turning an eyelash. We were marched through the lines of singing children to the end of the clearing. A lovelier welcome could not be imagined. We were then presented to the other dignitaries of the island; all stood quietly around us and gave the most courteous attention while Dr. Hoodless told them about the great white chief from a far country—America, who had come to give them a demonstration of his power over fire and sound, and show them his secrets of woodcraft.

Bear in mind M'Benga is separated miles from any other island and is without any apparent means of communication. Yet they knew all about me and knew I was coming and were fully prepared as this reception showed, for over the arch was crudely printed the word, WELCOME. Dr. Hoodless was astonished, but it came to me in a flash that the *lalis* had coded the story over the water the afternoon of my performance in Suva. Now I understood how the invitation had come to me to visit the island.

They had known where we would land and had prepared this ceremony; but to their mind this landing spot was not a suitable place to entertain us. We were requested to go back to our ship, and accompanied by the chief we were

piloted about five miles around a bluff to another place on the island where we found the characteristic village green surrounded by magnificent banyan and bread fruit trees. At once we were shown into the splendid hut of the chief. Here again was the beautiful flower-decorated interior. Special new mats fringed with bright bird feathers were laid for us to sit on, and after the chief and his council had seated themselves, the Kava ceremony began, followed by a feast.

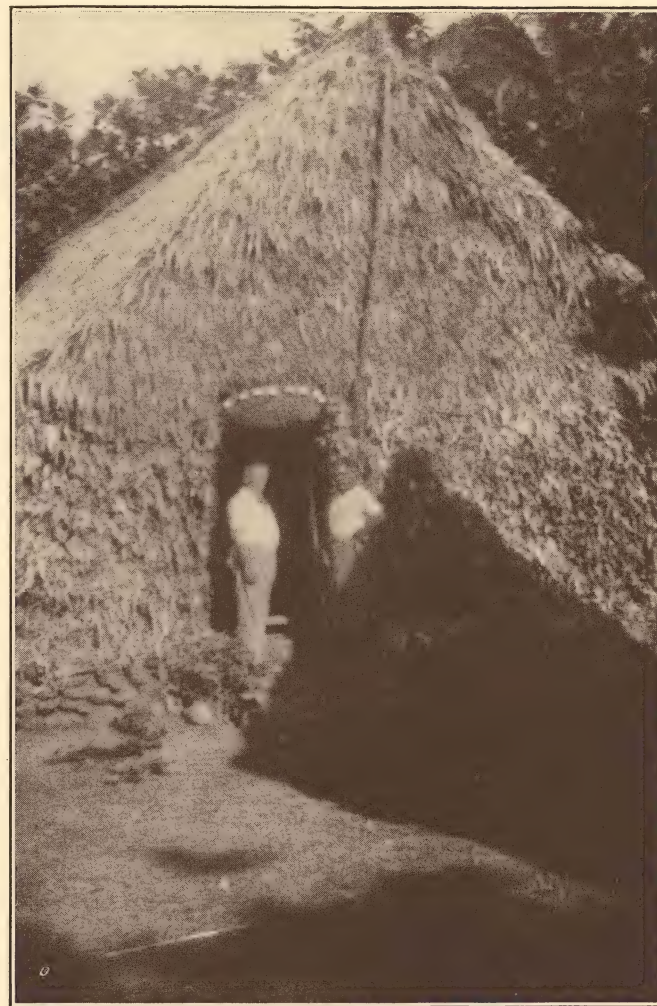
Meanwhile the Town Crier with weird chantings, carrying a tall staff, was going from hut to hut announcing a great event for the evening (my performance). At eight o'clock three large *lalis* on the village green were sounded in long strange beats. I called the attention of Dr. Hoodless to the water in them, showing they had been tuned in this way to the right pitch. Natives began assembling from all around and the chief led us to the vary largest hut, used as the village town hall.

All the villagers crowded in and seated themselves on the mats in respectful silence. Dr. Hoodless made an address in Fiji, and then interpreted my whole performance for me as I went through my various experiments. They gave me the most earnest attention, following closely every movement; and when I put out the

"sensitive flame" with my voice, at a distance of ten feet, with no sound that even their acute ears could hear, they were awestruck; not fear, but reverence, shone out of their intelligent faces.

Then with my rubbing sticks I produced a fire without tinder, something, the chief immediately told Dr. Hoodless, no native had ever done. Finally I sang my bird songs as I think I have never sung before. No words can describe their child-like delight and I enjoyed it with them. By this time I felt that I had completely won their confidence and they looked at me as though they thought me a supernatural being.

It was nearly ten o'clock and Dr. Hoodless felt it was the moment to ask about the Fire Walking. I was hopeful, but Dr. Hoodless shook his head doubtfully for he said he understood the preparations took some days and were part of the rite. He and the chief talked earnestly, and I gathered he was telling the chief that I could not stay long. Finally Dr. Hoodless looked toward me smiling, and I was overjoyed to hear that the chief had consented to put it on the next afternoon. Dr. Hoodless translated to me that it would necessitate the natives working all night, so they could not entertain us further, for which I was grateful as I was tired out. The chief bade us goodnight and we went back to our hut.



THE SHELLS OVER THE DOORWAY DENOTE THE CHIEF'S HUT



M'BENGA'S FIJI CHIEF AND THE AUTHOR

It was perfect full moon. I was much too excited to sleep and throughout the night we could hear the strange calls and cries of the natives at work. At daybreak a fine looking boy brought us a hot drink and fruit, which by this time was most acceptable. At eight o'clock the chief came in to announce that guides and bearers would come for us at one o'clock and he had arranged for a good dinner at noon. He said he was sorry that he had to leave us, but it was necessary for him to go to the fire pit and supervise further operations. He waved his hand courteously and disappeared in the bush.

Wandering about the village waiting for the guides, we came on a little brook; standing in it were two boys with very small bows and arrows. With their toes they turned up a rock in the bed of the brook, and like a flash, shot an arrow into something which we were astonished to find were prawns. After shooting them they strung them upon a thong of wire grass, and we learned at dinner time how good they were.

At the outer edge of the village in the thick jungle, there was the usual rooster tied with a long piece of *sennet* and we watched the boys catch the wild chickens; all the chickens of the island are wild, and like certain species of Chinese chickens, the feathers point the wrong way,

making them look ugly and unattractive to our eyes, but they certainly had a delicious taste.

Where the brook entered the sea, in half brackish water, I saw for the first time the remarkable little climbing fish, well known to naturalists. With their fins they climbed up a bush and out on to a branch, and when we approached too near they dove back into the brook.

The village seemed half deserted — the men and boys working at the pit; but at every hut I was affectionately greeted by mothers and children, who presented me with beautiful little plaited mats and charmingly woven fans of odd shapes. Others plucked a palm leaf, and with great deftness and speed, wove a pretty basket with a handle from the single leaf, and filled it with mandarines for me.

Noon came, and after our dinner the guides arrived. They led us through thick jungle about five miles over a hogback mountain. From the crest we saw a cove straight down below us with an outline like a broken cup, the mountains apparently rising straight up from the shore. It looked as though in descending the steep zigzag trail we would land in the sea, but we unexpectedly came out on a crescent-shaped clearing along the shore, huts under the trees, and the village common.



THE NATIVES ESCORTING US TO THE FIRE WALK



A BEAUTIFUL GRASS HUT WAS ASSIGNED TO US



HAULING AWAY THE BURNING LOGS AND EMBERS



HERE WE SAW THE FIRST OF THE FIRE WALKING PREPARATIONS

In the half-light of the jungle, apparently the whole population was moving quietly about and at the back, under the shadow of the mountain, was a roaring log fire in a deep pit about twenty feet over all; this was filled with very large rocks piled high in a cone, and in between the burning logs I could see the rocks were already cherry red. *This must be the fire walking preparation!* Was it possible, as I had heard, that into that fiery pit, barefooted, nearly naked human beings were to walk about? Was I at last to see this strange rite?

The afternoon was getting on and the light getting dimmer. The crowd of natives was silently watching the flaming logs. A number of the men were preparing long poles with roots formed into loops on the ends. At a given signal each native with a pole hooked the loop over a flaming log, and with a shout, all grabbed hold and dragged it off, while the people standing around, chanted something that sounded like old church music, organ and all. Their voices are so deep and sonorous, the lower registers sounded like organ tones. This process, accompanied by the chanting, was repeated until all the burning logs were pulled off. I asked Dr. Hoodless to pace the distance for my cameras. He could not get nearer than twenty feet, the heat was so intense. I mar-

velled that these people could work so close to such terrific heat.

Some of the workers brought on a huge vine about seventy-five feet long, looking like a thick rope, and with it they encircled the pit.

Fifty or so natives took hold and the rest stuck their poles all around the edge. Then they adjusted the vine at the back of the many poles, and pulled and tugged until they had dragged and scraped the vine over the surface of the rocks. In this way the cone was leveled and the glowing rocks spread evenly over the whole pit.

Now the rocks were white hot; no ashes anywhere. Profound silence came over all. Apparently without a signal, out of the thick bush came seven glistening native men — the Fire Walkers. Their loin cloths were of fringed tapa and wreaths encircled their heads and ankles. They quickly and quietly jumped into the pit, and then all slowly and deliberately walked three times around. While I was watching the fire preparations, the spirit of it had so taken possession of me that when they actually entered in, it seemed perfectly natural. In a daze I heard a voice, "they're on, they're on" — afterwards I realized it was Dr. Hoodless.

The atmosphere during the whole ceremony was quiet and serene, everyone looking on with



LOWERING THE GREEN LEVELING VINE INTO PLACE



"THEY'RE ON! THEY'RE ON!"
THE FIRE WALKERS ON THE WHITE HOT ROCKS



A FIRE WALKER ADJUSTING THE HOT ROCKS

deep interest, but in absolute silence while the Fire Walkers were in the pit. I got as close as I dared and watched only their feet. Each step was placed naturally upon the rocks, the soles of their feet conforming to the irregular shapes of the stones. There was no flinching, no haste, no expression of pain or discomfort.

Suddenly, there was great excitement among the onlookers; a low, deep murmur swelled louder and louder, and a young girl about eighteen ran out from the jungle to the edge of the pit. She had on the fringed loin cloth, the wreaths, and the circlets of dried ferns about her ankles, which I was told always denotes a Fire Walker. For a moment she hesitated; the deep roar of the natives became silent. *I could hear only the scuff of the bare feet on the white hot rocks.* Then, with the most ecstatic expression, she turned to the great chief, who was standing close to her, and held out her hand. He took it quietly, and together they stepped down into the furnace. My heart stood still—I could hardly breathe as she walked around.

The instant she emerged after the third time around, I rushed toward her, disregarding the appalling heat, and signed to her to sit down. She did so and I grabbed her feet—they felt perfectly normal. Placing one against my cheek, I

closed my eyes to note if my nostrils could detect any odor of burning flesh, but there was none. As I looked up into her face I shall never forget the look of exaltation. I could almost imagine a halo about her body. Then suddenly I realized my own position—my nearness to the pit. Fear possessed me. I felt as though I would be cooked, and I darted back. At once I became conscious that something unusual had happened, for all serenity had left the natives and they were wild with excitement. We learned that this was the first time in their history any woman had attempted the Fire Walk.

They all surged toward the pit and began throwing in bundles of dripping wet grass which had been prepared. The heat was so great that the wet bundles, about the size of shocks of corn, coming in contact with the red hot rocks, caused great clouds of steam to arise. When the first two bundles were thrown in they burst into flame, but very soon the fire was smothered, and before I realized it, all the Fire Walkers, including the girl, were seated in the steaming, smoking pit. At times they were completely hidden by the steam but I could hear them still intoning their weird chants.

Meanwhile, the crowd was gathering up all the poles, roots, loops, the gigantic "tug-of-war"

leveling root, and were twining them about the Walkers; others began shoveling earth over the pile. One after the other the Fire Walkers rose and in turn helped to heap the earth over the steaming rocks and grass, until everything that had been used for the Fire Walk was completely covered, and nothing could be seen but a neat, earth-covered mound.

As from a dream I awoke, and realized all thought regarding my motion picture camera had left me. At the beginning I had pushed and locked the button—and there it was grinding away, faithfully taking the picture.

A silent dispersing of the crowd followed the intensity of the Fire Walk. The chief led the way to the great banyan tree on the green which was not far from the pit, and where seats had been placed for us. Immediately the *yaqona* bush was brought and *kava* was prepared and served. Then a most interesting ceremony of gift presentation began. A long line of children came from out the farthest end of the green, each bearing a gift — taro, bananas, yams, papia, mandarines, cocoanuts, bread fruit. All marched in single file to where we were seated and piled up a mound of food until there were many hundred pounds. I was astonished when I was told it was for us, and that in order not to

offend their hospitable courtesy we must accept it and take it away with us. We said, "Manaka, manaka," as each child presented his gift and marched away. This closed the exercises planned for us. Dr. Hoodless and I stood apart and talked of the strange things we had just seen. *He had no explanation to offer, nor had I.* I was worn out with emotion, but I felt as though I could fly.

It was almost dark when we again tramped the five miles back over the steep mountain trail, a large crowd following us. We retired soon after reaching our hut, but all night we heard the natives singing and talking, talking, and cupping their hands—an apparently endless celebration.

The next day we were carried on the natives' backs a long way out to our boat as it was low tide. To convey the great gifts of food to our ship proved no labor to the stalwart men. Large woven baskets four feet square and three feet high were filled and placed in their canoes and paddled out to us, covering a large space on our deck. Again I must rely on my kind friend, Dr. Hoodless, as to what to do with all this abundance. Understanding their ways, he distributed it among the ship's crew, and when we arrived at Suva he parceled the remainder among the natives on the docks.



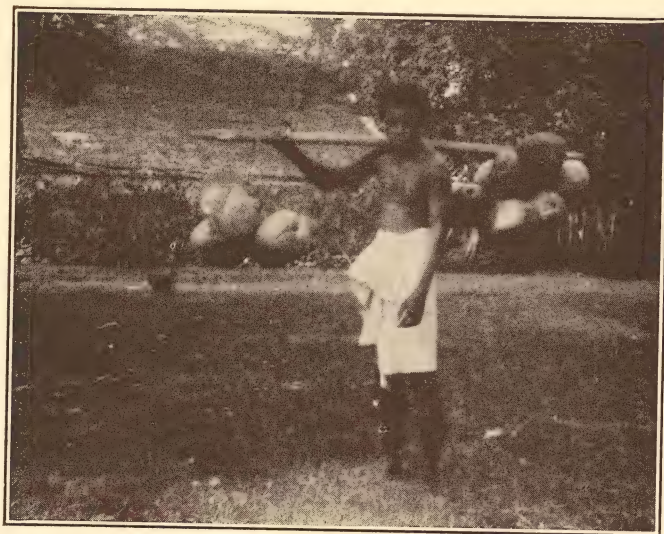
READY FOR THE FEAST



BRINGING ME THE GIFTS



I SANG BIRD SONGS TO THE CHILDREN



MY FIJIAN MILK MAN

I was happy to have won the hearts of these simple, generous and kindly people. Before leaving I tried to express my gratitude for the wonderful hospitality, the gifts, and above all for the great privilege of witnessing the Fire Walk. Dr. Hoodless interpreted that the chief said the Fire Walk was seldom put on now, but he wanted to show me the highest honor and express his appreciation for what I had done for him and his people.

On arriving in Suva I was asked if I would give a performance to the Native Military Force of the islands to a charge admission. I told them I owed so much to the Fiji government for their many courtesies, I would gladly give them a performance if they would provide a large enough hall, for I wished to invite the whole city. I was to sail in two days, so the afternoon before I left the large drill hall was entirely filled. I was fortunate in again having Mr. Johnson to play for me and he accompanied me in several numbers.

I asked them to let me have a *lali*, for I wanted to make an experiment, and it was in the hall when I arrived. Two of the natives also brought their rubbing sticks and made a fire, taking about ten minutes—using punk as usual. Then with my own two sticks, and later with theirs, I produced fire for them, both times without

punk. All my demonstrations were enthusiastically received, but what most interested me was the experiment I had planned with the *lali*. It was a perfect one, and when it was struck, the overtones put out the "sensitive flame". This seemed to them the climax of wonder working.

At the conclusion of my performance Colonel Golding made a speech and presented me with a beautiful badge, the official badge of the Defense Force of Fiji. They closed with three rousing cheers, and the entire regiment and brass band escorted me to the hotel. The band, with their bare legs and feet, their fine pompadours, the modern instruments, and the regimental coats, made a strange sight, but needless to say their music was thrillingly played. Later I received a letter of appreciation on behalf of the Military Force of Fiji.

Many friends, natives and civilians, came to the steamer to see me off. My heart was full when I said goodbye to them, especially to Dr. Hoodless, who had so devotedly befriended me. When the ropes were cast off the people stepped back, and as the ship slowly moved out, I suddenly felt constrained to look directly down. At the edge of the wharf, apart from the crowd, stood two stalwart Fijians; one had been my faithful companion, serving me tirelessly from

the very first day and arranging everything for my pleasure and comfort. The other was a young chief who had seemed especially drawn to me. Big tears rolled down their cheeks. This was too much for me. In sign language I passed my hands over my heart, and stretched out my hands to them. Instantly they imitated me—and that was my farewell to beautiful, kindly, hospitable Fiji.

This has been my fourth experience visiting far away British Colonies, and I must express how deeply I admire the superior wisdom of a government that has so cared for and guided the natives in every land where I have been, for it has seemed to me they have a most happy way of allowing the native peoples themselves to enter into and assist in the management of affairs, to the blessing and benefit of all.

Fiji Military Forces

Defence Force Headquarters,

Suva, 5th June, 1925.

Dear Mr. Kellogg:

I desire on behalf of the Officers, Non-commissioned officers and men of the Forces of the Colony to say how very much we all enjoyed your entertainment yesterday afternoon.

We particularly appreciate the goodness in

giving up to us an afternoon of your valuable time.

I assure you that each member of the Defence Force is a sincere friend of yours, and we all unite in wishing you the very best of luck wherever you go.

I am,
Yours sincerely,
(Signed) C. J. T. GOLDING,
Colonel.

Education Office
Suva

9th May 1926.

Dear Mr. Kellogg:

I have just received word from M'Benga that all the goods I sent there have duly arrived.

What you will doubtless be pleased to hear is that I have got an expert native in one of the distant islands half way between here and Tonga, to make me a set of four "lalis"—all the same size and of the same wood and to be as nearly as possible in unison with one another. They are just about finished, as it has taken many hours of patient toil to do what probably has not been done for many scores of years. The idea is of course yours, not mine, and when I get the "lalis" to Suva I hope to try them and see if

the others ring in sympathy when one of them is rung. It is intended that the *lalis* shall be given to you, or if you do not want all four of them, you could give one or more of them away to a museum.

I have received many inquiries from friends who desire to know when you are coming back to Fiji. I hope you do, for then I can promise you a still more interesting time.

I am now in the middle of an Education Commission on Industrial and Applied Education for the Fijians and Indians, and my office work and administrative duties keep me fully occupied.

I hope you are satisfied with the way I have spent the hundred dollars. The natives on M'Benga are most certainly satisfied and they will certainly give you a right royal time when next you and your friends go there.

With kind regards and best wishes,

Yours very sincerely,
(Signed) D. W. HOODLESS.

The year after my return from Fiji a government boat was sent to the island of Como one hundred and eighty miles from Suva, where the *lalis* had been made. They eventually reached San Francisco and are now resting on the terrace of my home in the Santa Clara Valley.

VI.
FOR THE CHILDREN

THE AUTOBIOGRAPHY OF PETER JUMP

I WAS comfortably housed for the season in the deep bark canyons of the Giant Yellow Pine on the bank of the crystal river. Many are the homesteads and hunting grounds for such as I in this great valley, but to my lot has fallen the King. I afterwards heard one of the Inhumans say it was ten paces round and two hundred feet skyward.

The Gnat folk love to hover and settle on the broad bosom of the river, and I knew the kindly breezes would waft them inward to the crags and precipices of my bark canyons—delightful tidbits for my evening meal. The red-headed woodpecker had guarded the life of this tree from the very beginning. No grubs were permitted to nest and ripen in Yellow Sentinel's heart and the

deep holes made by Redhead's sharp beak are much appreciated by me and all my kin. Across every hole Mrs. Silver Spider spins her gossamer veils and threads the insects on their shimmering strands. She generously shares these tasty morsels with all her good neighbors who live close by in the bark.

Yellow Sentinel's deeply serrated coat makes innumerable trailways for all creeping folk that sooner or later must pass my door, supplying me with abundance of food. Such a great life ground are all tree barks, but Yellow Sentinel surpasses them all.

By day I drowse and dream, and drowse again, and I am secure against intrusion or attack for I change my dress to the blend of my surroundings.

Into this peaceful, busy, happy life there came a great calamity—or what seemed so to me. Tap! Tap! Not the mellow thunder of the woodpecker, but the hard, cruel tone of the *glittering destroyer*. An ax it is called. I had been told of this terrible thing in the hands of giant creatures called Inhumans—and here they were. I had heard nothing good of them, and although I had never seen one, I knew them at once. Every least creature knows the trail of life sapped, destroyed, doomed, that follows their appearance in the woods.

Yellow Sentinel is condemned, thought I. His kingly head is to be laid low, the music of his boughs stilled, the myriad life his hospitable bark shelters, annihilated.

I kept very still in my cavern in the bark, and determined when dark came I would hop away without being discovered. From my hiding place I could hear them speaking. Said one, "What a fine camping spot! This splendid big yellow pine is so near the river we could not find a better place. Everything here to make home happy."

Then came tapping, hammering, talking, and going to and fro; then more hammering and chattering. I palpitated between hope and fear until twilight. At last I knew by the sudden cooling in the atmosphere that the time had come when I could venture to begin my hunt for new and safer quarters. I cautiously crawled to earth and had journeyed but a few hops when I became aware that I had entered a cavern filled with softest, cool green light. It was like nothing I had ever seen. Was it, perhaps, some new kind of forest?

Hither and thither I crept until I encountered a smooth, high wall. It took all my skill to scale it. Up and up I went. Reaching at last the top, I heard a tremendous buzzing, pleasant to my ears for I was hungry after my day of anxiety.

Swarming about a long wooden pole were myriad gnats; winged food sufficient for all Frogdom. What need to journey farther, what better could I ask; here I would remain.

Snugly I secreted myself in a corner at the end of the pole. I had only to dart my tongue in any direction and a royal meal was mine.

This happy hour came suddenly to an end. Once more I was terrified by the voices, this time close to me—but now I was without means of escape. My throat throbbed. From my height I looked down. Ah! What could save me now! I was looking straight down into four great eyes. I was discovered. I trembled. I felt I was lost.

Said one, "Oh, look! Here is a darling little tree frog—a real Peter Jump! How did he ever get up to the ridge pole? Oh, I see! He must have climbed up the sides, for look at the tips of his little paws; they are four tiny vacuum cups, so he can cling to any surface. How much we humans owe to these little fellows. With the birds and snakes they balance the insects that would otherwise destroy the earth for mankind."

Then another spoke, "Don't touch him, dear, we are terrifying him. See his little transparent throat vibrate. I hope very much that he will adopt us, for he is indeed nature's flytrap, and



SQUATTY



PETER JUMP AND TINY TIM

we surely will not be annoyed by the insects if he remains with us."

Then a soft voice addressed me. "Don't be frightened, little Peter, we love you and you match our green balloon silk tent so beautifully. Do, do stop with us. You shall not be disturbed and this shall be your palace."

These kind voices could not belong to the same great giants of whom I had heard such tales of cruelty and destruction. Pond told tales of my own kind, of red flannel on hooks, of frying pans and flames. Legends unintelligible, but vaguely horrible to me. But by this time I was becoming reassured. I determined to remain where I was and await events.

They turned away from me but I could still hear them talking. Said Big Voice, "What a peerless camping ground! This magnificent yellow pine is the focus of the whole Valley. It towers in glorious harmony with the domes and cliffs. It will shelter us from the sun, its scattered needles are a carpet, and gathered, will make our beds under its boughs. This wonder spot of the earth, at least, shall remain undisturbed. The wish of all hearts has become law, and the ax shall never ring again in this glorious Yosemite Valley."

Yellow Sentinel then was safe for all time. I

resolved to trust wholly these beings and I would watch over them and protect them as they lay on the ground at night.

Now began for me a wonderfully happy life. In the Green Cave I slept all day, at twilight I began my work; but I soon saw I could not take care of my new friends without assistance. So when night came I softly whispered the abundance frog folk call.

The first to respond was Tiny Tim. He seemed very small, scarcely larger than one of my own paws, but I knew he was an expert noseum and midge hunter and I needed him and several more like him. Then came Cousin Jane, rather dark complexioned, but for that very reason, well adapted to keep the corners free from ants.

In my new home were the strangest shaped caverns and canyons that needed attention as well as the buzzing dome. In one corner was a gigantic object. I felt sure it was hollow. Its top being open one day, I entered and explored it. Everywhere were things as soft as Silver Spider's webs with a perfume like all the flowers. Soft Voice came instantly to my mind, and I knew these things must belong to her.

Standing on the ground beside the great object was a row of long hollow tunnels, two and two alike. At the bottom of the tunnels were

deep, dark, secure places for a quiet day's sleep. Many more curious objects were in my new home. All would be useful to me and my relatives for hiding places.

I had learned in my short experience with my new friends that their vicinity was a protection and their love a guarantee of safety from all danger.

And so night after night I called, and soon had a goodly company of happy workers.

One morning I heard Soft Voice cry out, "Oh dear, Oh dear, I have come near crushing little Peter! No, it isn't, it's Cousin Jane. She was in the very tip toe of my high top boot. (That's the name of the tunnels, thought I), and a minute ago I saw Peter looking out from the sleeve of my night gown in the bottom of the trunk. What next? It will be Tiny Tim in my thimble, I suppose. But Oh! I do wish they would take better care to clear away these thousand leggers."

What a reproach this was to me! I had not noticed these creatures—they are not my natural food. However, I knew the very person who would be thankful for the opportunity to feed in the same safety that I and mine enjoyed.

Close by, under the damp leaf mould lives a distant kinsman of ours, Squatty Suff. I never

hear him go out to his feeding ground, his prowling work is so silent; but I can hear his great heavy flip flop returning.

That night and for several nights I called, and called again for Squatty. I was surprised not to have a response, but suddenly the reason came to me. Squatty was afraid of the strangers. I added the safety call, and sure enough, flipity flop, Squatty cautiously thrust his nose under the side of the Green Dome.

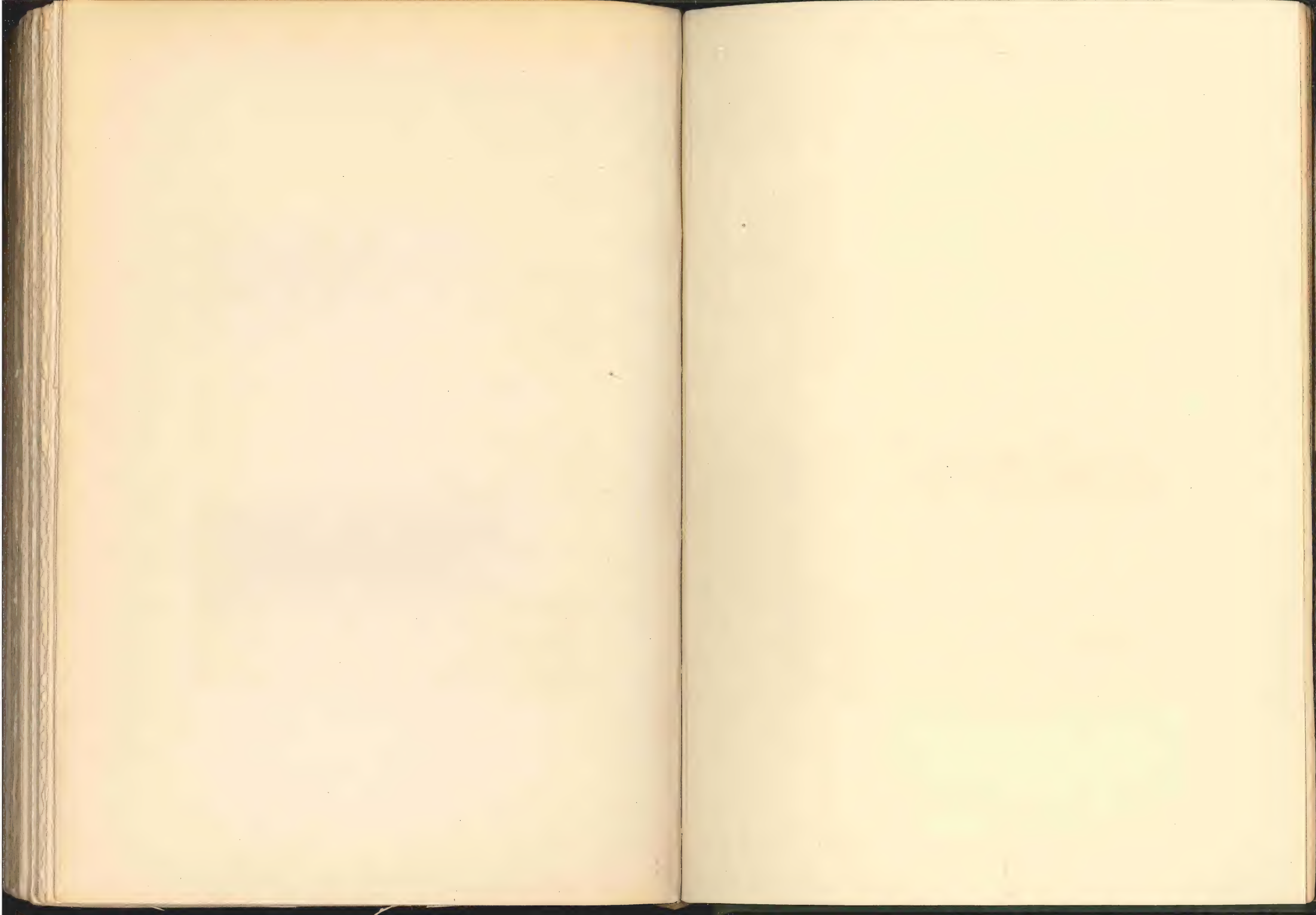
"Good hunting," he wheezed.

"Good hunting," I answered. "Come closer, Squatty, I have something wonderful to tell you. There is a new world that I have come to know and love, and it is right here around us. You used to frighten me when I was a little frog by stories of cruelty from those you called Inhumans. I can tell you all about them now. Humans, they are called, when they understand and love all creatures. I have lived two long moons with them in safety and harmony, and they bring peace and comfort instead of discord and death. I have learned they need our care and protection as we do theirs.

"Come and help us keep their home clean and tidy, and you too will share the blessings of this new, old world."

VII.

A DECALOGUE FOR CAMPERS





EDITH AND HER GRASS DOLLY. THE CHILD HAS NEVER
KNOWN FEAR

PUT IT BACK AGAIN

—A Decalogue for Campers.—

IF you lift up a big flat stone and see myriads of little folk scurrying around underneath—put it back again. Do not leave the glaring light or sun to bleach their home into a desolate graveyard. These little non-human creatures have their part to play in the beautifying and upkeep of this world, just as we do. Unmolested, they will perform their duties perfectly.

If you chop down a tree, put another back again. Taking the life of a tree means taking the life of the soil. Read the history of any country where they have deforested and you will find it a dried up, soil-washed, forsaken, cursed country. Trees are living, breathing, life-holding, moisture-holding creatures to bless the earth.

As you start to throw the stone to crush the head of the serpent, put the stone back again. You would be crushing a friend, one who looks after your summer day's comfort; for without

these adroit, cleanly, graceful creatures you could never again go camping, sleep upon the ground, walk through the grass, and have the companionship of domestic creatures. Snakes are silent workers crawling everywhere—meadow combers, balancing the insect and rodent life so they will not over-increase and destroy the earth for man.

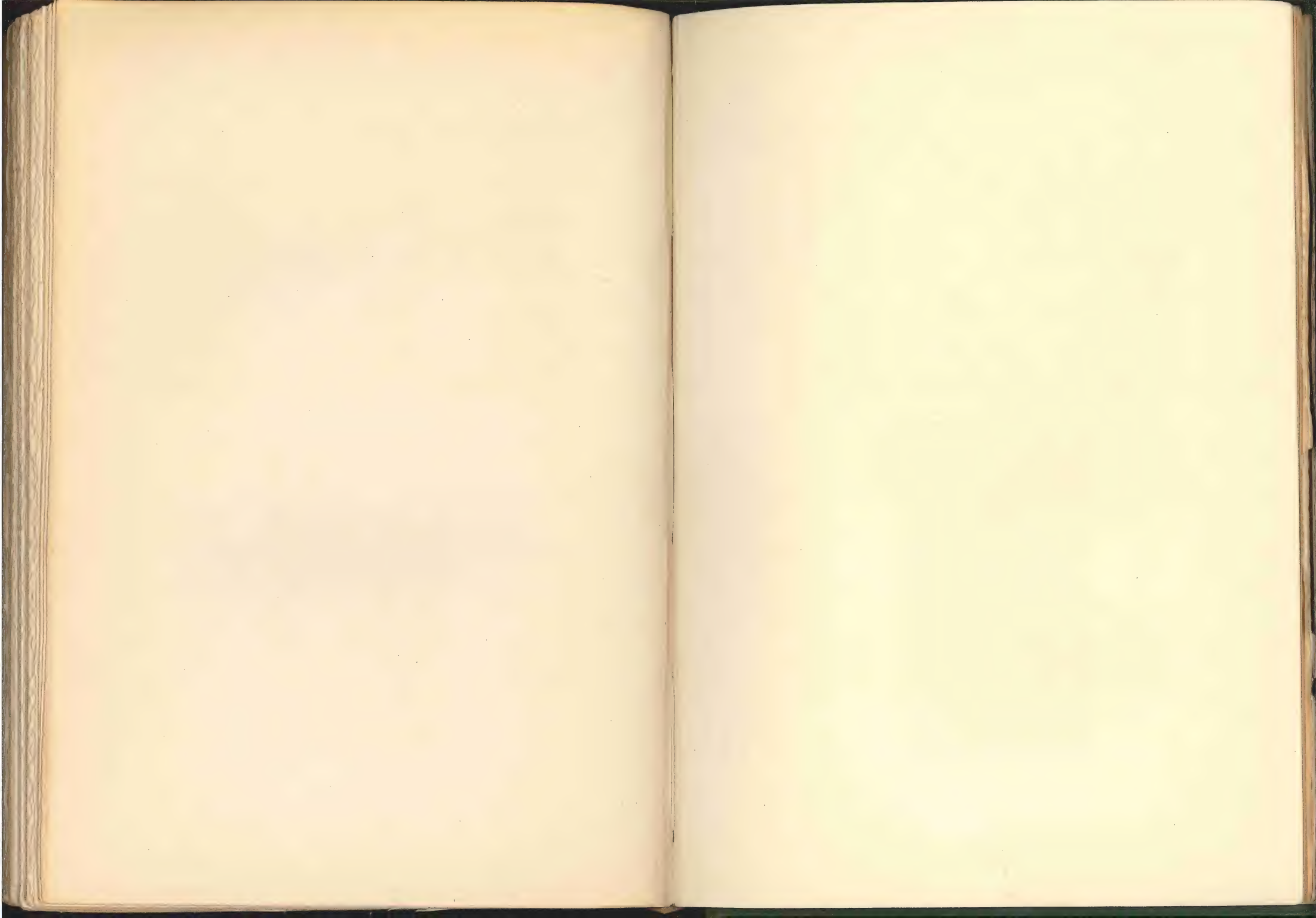
When you pick up the rod to correct the child—put it back again, and remember there is no bad child. It is only the good one turned wrong. Let your own good thoughts and actions show the child the way. Absolute trust in the good in the erring child will call forth loyalty and like trust. One grain of suspicion is sufficient to defeat love's purpose. Trust the good in animals, reptiles, the child, all creatures, whether human or non-human, and only good will result.

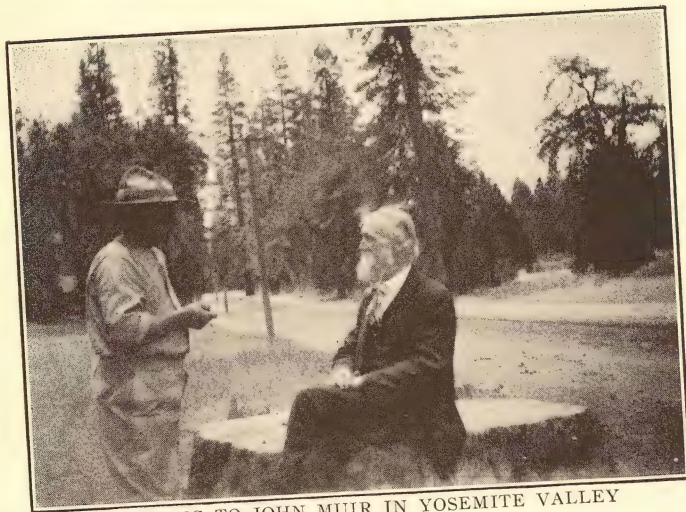
When you reach your camping place and enjoy the beauty and comforts nature so liberally bestows: shade, shelter, water, food, and then move on—put it back again—the perfect order and sweet cleanliness maintained by nature and the birds and wood folk in forest and meadow. Man alone of all creatures leaves a trail of uncleanliness and disorder.

When you pick the wild flowers, do not take them all. Put back the roots, that nature may spread her beauty in all the years to come.

VIII.

WITH JOHN MUIR IN THE YOSEMITE





TALKING TO JOHN MUIR IN YOSEMITE VALLEY



THE SAME SPOT IN 1929

WITH JOHN MUIR IN THE YOSEMITE.

WHEN I met that great Californian, John Muir, the first time, I felt he represented the crags and spaces of the mountains he so loved. I had spent some months with John Burroughs and the contrast was interesting. Burroughs was, to my mind, a gentler, more loving naturalist—Muir, rugged virile and fearless. It has been a great privilege to have known both wonderful men.

My last time with John Muir was in his beloved Yosemite, and the last nights around the Ahwahnee campfire we each took charge of an evening assembly. I had walked into the valley 111 miles from Sonora via Tuolumne, and had passed through the Hetch Hetchy. I was fired with enthusiasm for its beauty and expressed it. Muir answered with tears in his eyes that the political vandals were proposing to dam the entire valley and use the water for the "dear babies of San Francisco." "Yes," he said with vehe-

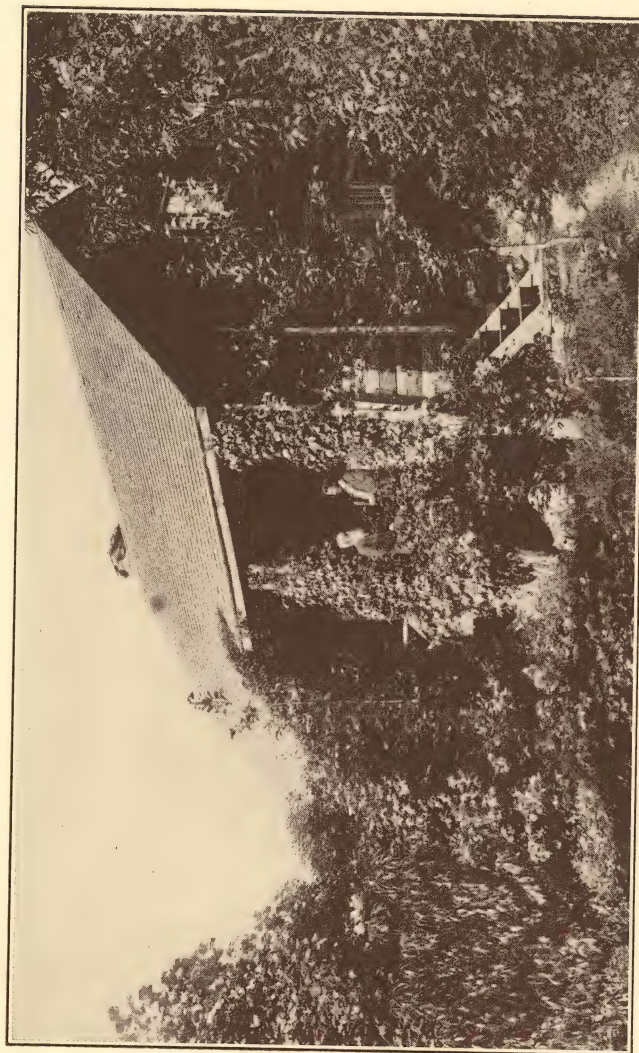
mence, "they would drown the valley and blot out all that beauty and the politicians would divide the plunder!" He knew it was the water-power they were after and not primarily drinking water for San Francisco.

At that time I was writing the story of "Peter Jump and Squatty," and in talking it over with Mr. Muir, I said for many days I had been trying to put into words how I induced Squatty to come across the trail and into my tent. I could not seem to do it satisfactorily so that the reader might get a picture of it. Muir stopped me and said, "Don't be in a hurry, it took me thirty years before I could get Stickeen across that narrow ice bridge." The next day I read "Stickeen" again and I felt sure it was worth thirty years to wait for such a masterpiece.

Around the fire that night, Mr. Muir asked me if a fire could be produced from two pieces of redwood off the same piece. I said I thought it could be done. Mr. Muir selected the stick of wood from the great pile of wood ready for the camp fire. He stood close to me and encouraged me while I rubbed with my bow—many minutes of vigorous work. Of course, I used no tinder or punk—the fire was created and blazed out from just the two sticks. My reward was a hearty hand-shake from Mr. Muir as the campfire assembly applauded.

IX.

JOHN BURROUGHS TRAMPS WITH ME
IN THE WEST INDIES



JOHN BURROUGHS AND MYSELF AT SLABSIDES

JOHN BURROUGHS TRAMPS WITH ME IN THE WEST INDIES

FULL of enthusiasm about my Jamaica trip, I was talking to Horace Traubel, Walt Whitman's companion and later his literary executor. Will Innes, another Whitmanite, joined us and after relating to them the many delightful experiences I had had there, both Innes and Traubel said I must meet John Burroughs and tell him about the trip as Mr. Burroughs was very much interested in any voyage South.

A few days later, Innes and I drew up in a train on the West shore at West Park on the Hudson. Standing on the station platform, almost alone, with a market basket on his arm, stood John Burroughs. His flowing beard and sturdy figure made a fine picture.

Innes had written him we were coming. He was most gracious in his greetings and said the first thing to do was to get food. We were to be entertained at Slabsides, Mr. Burroughs cabin in the woods. Therefore we first went to the country store and market near by.

Slabsides was where Mr. Burroughs did his literary work, a stiff climb over a rocky trail up the mountain side. I was delighted to see with what vitality and enthusiasm he made the trip loaded as he was with the heavy basket full of provisions. He would not let us help him, for we had our grips and cameras to carry—enough for us he said.

The cabin was located in a miniature valley part way up the mountain. Everything was built in "rustic". The cabin itself, furniture, beds, and fireplace he had done with his own hands.

Fortunately for the few days we were there, there were no visitors so we talked, tramped and photographed to our hearts content. Mr. Burroughs was profoundly interested in my story of Jamaica, so then and there we planned that the coming winter we would go. He was pleased that I had been there and could be his guide.

I returned to Riverby, Mr. Burroughs' handsome home on the Hudson, several times that

summer but stayed always at Slabsides or with his son Julian Burroughs, a fine young Harvard graduate who had also become interested in the Jamaica trip and who finally decided to accompany us.

On January thirtieth, 1902, we sailed from Philadelphia. The weather was bitterly cold, river full of ice. Innes and Traubel were there to see us off, and as always a camera enthusiast, Innes secured pictures of our departure.

The first day out was rough and stormy, but toward the close of the second day the weather became perfect and nearly all the ship's officers appeared on deck in white duck. There were but three or four other passengers besides ourselves. The third day all sickness was forgotten and from then on the journey was a joy.

We landed at Port Antonio and immediately went to the hotel. Mr. Burroughs was anxious to get with the natives so I took him for a stroll thru the village streets. Everything was a delight to his kindly nature, for all the natives were so simple and friendly. There were few tourists in those days—no automobiles or motors of any kind on the islands. Far into the night we visited streets, stores and markets. Everywhere we were met by smiling happy faces and all the natives were delighted with the white haired

"Bukra". I believe Mr. Burroughs was but sixty-four at this time, but because of his long white hair and flowing beard, he looked older.

Before leaving Jamaica the year before, I had told a friend, Mr. C. B. Taylor, a naturalist, my sorrow in not being able to hire a man with a team who would drive slowly. They would refuse to stop to let me photograph or see the intimate scenes and natural history specimens, etc., by the roadside, and the native drivers would unmercifully whip their horses into a full gallop and never stop until they had reached the next settlement. All the drivers insisted on doing the same thing.

"Well", said Mr. Taylor, "let them take your things in the surrey and you walk; they surely would wait for you at the next village if you make a contract with them." "Ah, but I might want a camera or something out of the surrey before I reached the next village."

The word "contract" struck me and I asked, "Do they keep a contract if they sign it?" "Yes indeed," he replied, "but they insist that you keep yours to the letter." "Very well," said I, "the next time I come to Jamaica I will make a contract that will bind both parties, one that will satisfy me but I doubt if the driver will be as well pleased." "Oh yes," said Taylor, "if the fel-



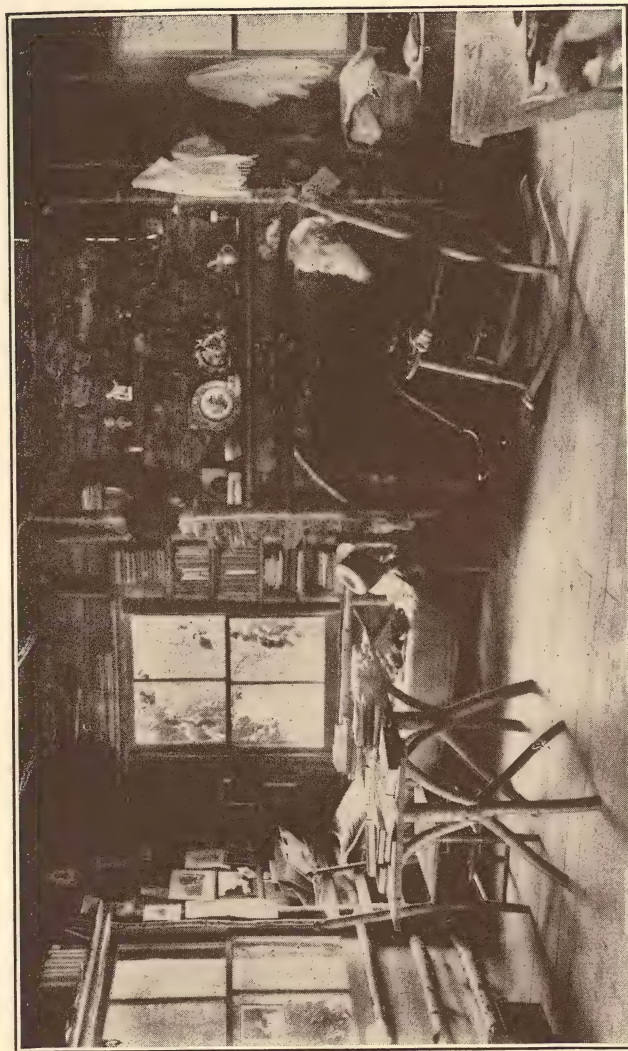
JOHN BURROUGHS, JULIAN BURROUGHS AND CHARLES KELLOGG
LEAVING PHILADELPHIA JANUARY 30, 1902 FOR THE WEST INDIES



THESE PERFECTLY PRESERVED WALLS WERE FOUND
EVERYWHERE IN JAMAICA



FOOD AND FRUIT WE FOUND IN ABUNDANCE EVERYWHERE



IN THE SLABSIDES STUDY



THE MERRY-GO-ROUND



LOOKING AT THE TREE FERNS EN ROUTE TO MONTEGA BAY

low signs the contract he will live up to it no matter what the cost."

I now recalled this conversation, and the next morning I found a native who had a good rig, would go anywhere on the island, and would stay with us for six weeks for one pound a day; he to furnish the team, feed them himself, keep up repairs and allow us all the duffle and baggage we could load in. He signed the contract before witnesses and I signed also. Each took a copy. But here was my catch clause in the contract. He, the owner and driver, was to drive his conveyance for the six weeks *behind* Mr. Burroughs and me, and if at any time he broke his word and drove *ahead* of us he would forfeit the contract and I would not pay him anything.

He readily signed and I arranged for him to meet us at Spanish Town, and as all the drivers knew one another and all drove the same wild pace, he had no suspicion what was in store for him. Next day he was there according to contract and I asked him if he had his contract with him. He showed it to me and likewise I showed mine. We loaded all our duffle and cameras as well as food into the surrey. A large crowd stood by gazing, chatting and commenting.

The last thing, Mr. Burroughs took off his coat and put it in the back seat. This was espec-

ially amusing to the crowd for gentlemen always wear their coats in Jamaica no matter how uncomfortably warm it may be. Mr. Burroughs' dignity and fine bearing always commanded the highest respect. So with just blue jeans, congress gaiters, shirt and straw hat, we started out across the square walking at a good pace. Our driver called out, "Massa, massa, where is your other carriage?" I said, "Come on, come on, *drive behind us.*" He followed all right at first but not until we were well out of the old Spanish settlement did it dawn upon him what the contract actually meant. He supposed Mr. Burroughs and I were to drive in front of him in another surrey. He never dreamed we meant to walk.

I was to find out if Naturalist Taylor was right. Yes, the driver did keep his contract to the letter, but not without bursts of anger inflicted upon his poor beasts. After the first few days when the driver's rage had subsided, you could actually see the poor ponies' condition improve, until at the end of the six weeks they were as fat as butter.

Meanwhile we could stop whenever we wished, to photograph, investigate, or remain at a native hut over night. All of which was just what we had planned.

Everywhere we seemed to create the greatest interest, as it was most uncommon for white people to hike in the tropic heat. The natives would follow us from village to village, and when we met a party going in the opposite direction they would often turn about and go with us, some times many miles.

"TAMPA DA, MASSA"

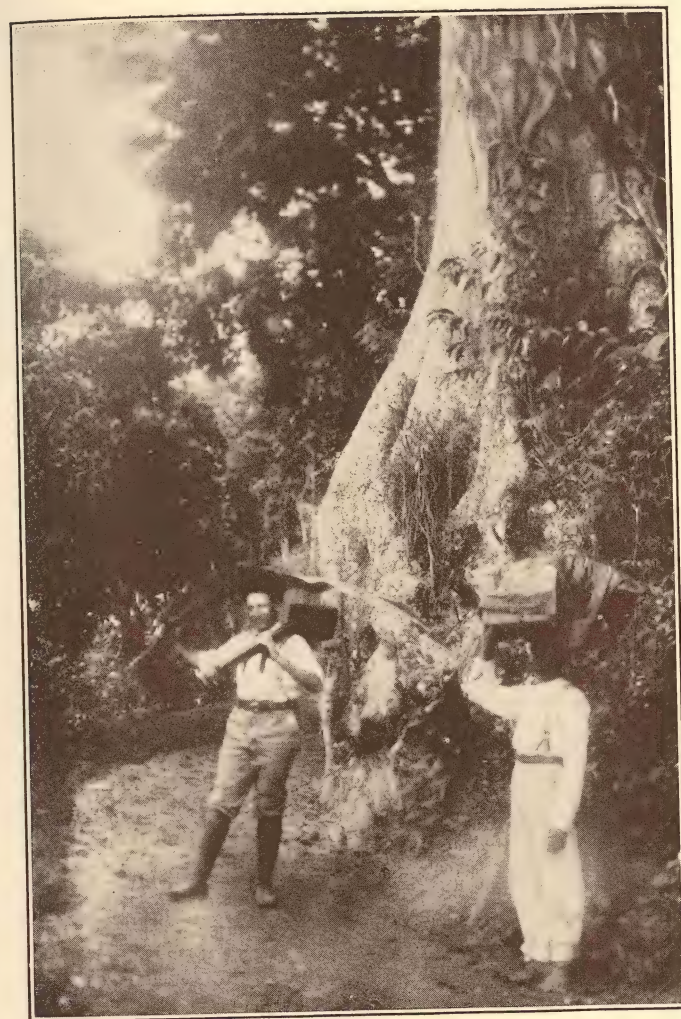
We were walking from Bog Walk to Montega Bay. From Kingston to Bog Walk the land is flat but a fine panorama of mountainous country rose before us. We followed the excellent coral roads that thread the country. All over Jamaica these roads are fringed by fern trees, and orchids hang everywhere. Lush growth is the rule, more tropical than in the Fiji Islands. In many places the roads are bordered by low stone walls, concreted—erected, we were told, a century ago.

We had two native girl carriers for our cameras. Suddenly, from what seemed the very heavens, came sounds of a glorious chorus that thrilled us. I had heard such chanting on my previous trip to the West Indies but had never learned its source. I told the girls to put their loads down and asked them where it came from. In their strange patois they said, "Tampa da, Massa, tampa da, Massa." "All right," said I, "take us to it."

We turned back a little way and they began to guide us up a steep hill. As we neared the top the music grew fainter, but when we reached the crest there burst forth such a marvelous volume of harmony that we sank to our knees in reverence.

Looking down into the deep pit of what seemed an extinct crater we saw to our amazement about one hundred black-skinned natives, men and women, all working in rhythm with wooden mallets beating the earth. Our girl carriers told us they were making a reservoir, tamping the earth, sides and bottom, to hold water. At one side holding to a slender sapling was a very old man, a veritable patriarch, weaving back and forth, chanting something sounding like, "Naaou, naaou, beeta da groun jus so-o, so-o." The natives responding, "Beeta da groun jus so-o, so-o. Beeta da groun jus so-o, so-o." the answer floating from the harmonized voices as they struck the ground with their mallets, "Beeta da groun jus so-o, so-o, beeta da groun jus so-o, so-o." All given in close harmony.

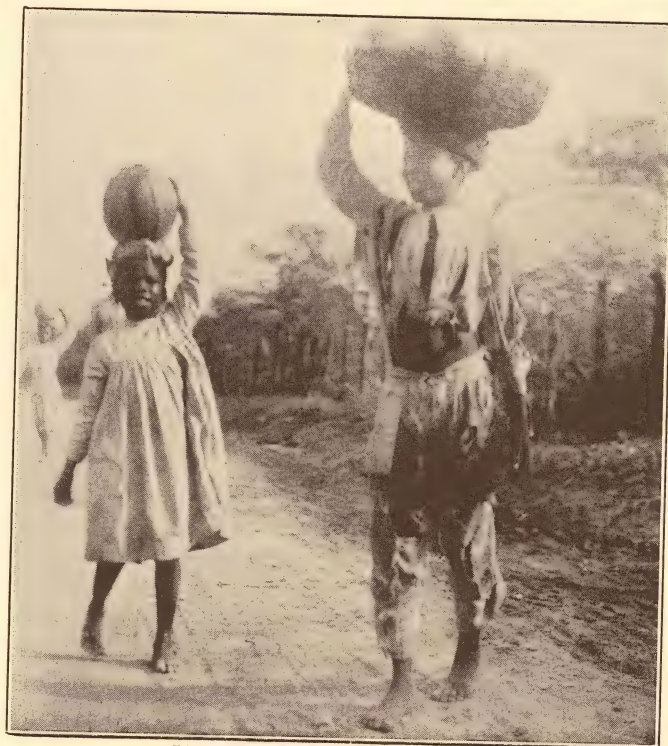
A youth whom I was told was the eldest son of the community stood close by. As his grandfather sang the opening chant, weaving his body back and forth, the youth sounded a great conch shell horn at intervals. This was so powerful it



UNDER A JAMAICA UMBRELLA (BANANA LEAF)



A CALABASH TREE



JAMAICAN WATER CARRIERS

echoed and re-echoed as the sound waves struck the sides of the crater. The horn and voices reverberated in the hollow chamber and the heavenly music floated out of this nature's great sounding board and could be heard for miles around.

The streams in this part of the country have a strange way of suddenly dropping into the ground and reappearing miles further on, gushing out of the earth a full size stream. Between these places we constantly met women and children carrying calabashes full of water on their heads.

As we neared the Cock Pit country, we met coming toward us on horseback, a parson. He was dressed in black broad cloth and a flat clerical felt hat, looking painfully warm in this dignified garb. It seemed the Kingston papers had been trying to follow our journey, sending at times a reporter to interview us. All of which we tried to escape, but enough was published to center an interest in our hike.

The preacher put two and two together when he saw us. He immediately dismounted and bade us welcome to his parish and most cordially asked us to return with him to his home and spend the night. It was just such invitations as this which we were trying to avoid from the

white people, as we begrudged every moment lost with the natives. However, in this case I suggested to Mr. Burroughs that we accept, for it looked as tho a severe storm were brewing. The rector, too, saw what was coming and pressed us to hurry. Another mile brought us to his home and we were soon most comfortably housed in the large manse—a low bungalow type of building surrounded by wide porches on three sides. On the fourth side was the room assigned to us. A terrific electrical storm and down pour came but it left a crystal clear atmosphere.

Mr. ——— was a Church of England rector and had lived some time in that part of the country. He gave us many interesting details on Jamaican life and it was a delight to hear Mr. Burroughs answer all of the Rector's eager questions about the outside world.

We retired early, all being good and tired and were soon asleep. There was but one bed in the room but this was the largest one I had ever seen. It was an extra broad bedstead raised the usual height from the floor but without springs or mattress—just a banana trash braided mat and two sheets. Mr. Burroughs, Julian and I occupied this much welcomed and even comfortable bed, but it was too warm for even the sheet covering.

At midnight Julian and I were awakened by a queer shuffling sound and we both sat bolt upright in bed to see what it was. The moon was shining brilliantly into the room and there in the silvery beam, outlined in the deep bay window, was Mr. Burroughs doing a cheerful little clog dance. He was always full of fun, so we waited to know what it was all about. As we sat up he said, "Boys, give me that extra sheet—the altitude of that bed is too much for me." I could not imagine what he meant but we gave him the sheet. He took it, spread it upon the floor, lay down with a satisfied expression and said, "There, I have lowered the altitude and feel better." This amused us very much, for our host's home was on one of the highest points in Jamaica and this fact had seemed to make a great impression upon Mr. Burroughs. He went peacefully to sleep after this and we all awoke in the morning much refreshed.

There were many caves and pits in this Cock Pit country which interested us greatly. Our host procured for us three native guides who gathered bundles of candle wood and agreed to guide us through the largest cave.

Julian had secured before leaving the United States a remarkable new lens and he wanted to try a flash-light. I, too, had from London a new

type of Dalmeyer lens. From the rectory we tramped thru rugged pitted country which became more and more interesting as we neared the caves. We finally arrived at the entrance of what we were told was the largest of that group. The guides led with torches and we passed thru several chambers of different sizes, and came at last to the innermost cavern which was similar to those I had seen in the Mammoth caves of Kentucky. In the weird flare of the torches we saw hanging from the ceiling myriads of bats. They hung like clusters of swarming bees.

Without considering what might be the consequences, we set up our cameras, using the men with the torches in different places to focus upon. These natives of course had never seen a flash light and we neglected to explain to them what was to take place and warn them. Julian wanted to make sure of a complete illumination for so large and lofty a chamber, so he touched off all the powder we had at one flash. It roared and reverberated in the cave like a cannon. The flash and detonations made a terrifying moment. We were almost as much startled as the natives who made a bolt for the nearest opening, and at the same instant we were enveloped in clouds of flying, whirling, bats. Left in complete darkness, for the men in their terror had taken the

torches with them, we had to gather up our cameras and tripods as best we could. Fortunately, Julian like myself had the sense of direction, so without becoming excited we groped our way out, but not without some difficulty for we had to pass through several narrow tunnel-like passages before we came to the entrance. As we emerged we were conscious of the sound of rushing water that we seemed to have been passing through. Close to us, but strange to say not once touching us, was a stream of bats rushing out to the entrance.

From the Cock Pit country we walked to Montega Bay. There we were hospitably entertained at the home of Doctor ———.

The doctor had the most unusual entrance to his bathing beach. Many yards back from the ocean shore there was a cave that made in from the beach and ended directly under his house and garden. When he and his family wanted a swim, they entered the cave from a hole in the garden. Immediately one could drop down into the surf, for the water came right into the cave. There in this cool chamber was the most delightful of all tropical bathing places.

The previous season I had visited a strange place called the Salt Pond Marshes. Once in three years the sea overflows and floods back in-

to this low spot, and after the second year and especially the third, the water at night becomes marvelously illuminated with phosphorescence. I was anxious for Mr. Burroughs to see this strange sight. Besides, for some unusual reason the Southern Cross from this place seemed to perform in a special way.

It required a vigorous and perspiring effort to reach the marshes but we finally made it at late afternoon. There was a care-taker's hut at the edge of the pond, and the place was leased by some native fishermen who waited for night time to make their catch. It was this strange sight I wanted Mr. Burroughs to see. The old native said the men did not start to fish until the water would drip drops of gold when they dipped their hands into it. So we waited until the proper darkness had come.

Drops of gold was truly what it looked like when Mr. Burroughs dipped with his hand again and again in quick succession, and the water as it dropped back splashed liquid fire, seeming to flash and glitter.

Their method of fishing was peculiar. Three natives in dugout canoes staked them in line crosswise of the pond. A net about six feet high was stretched from a pole at each end of the three canoes, like a lawn tennis net sticking

up above the water. Down into the water was stretched on the under side another long net. At a given signal, several natives in canoes from the upper end of the pond began to make a great racket and splash the water, pounding the surface with their paddles and moving toward the net. At every splash the water from the natives' paddles would strike great flashes of incandescent fire, lighting up their faces in the strangest and most wierd manner.

But most remarkable of all was that when the excited fish began to move rapidly through the water, their bodies became streaks of golden flames. Gradually the rushing fish flashing away from the beating canoe-men were driven toward the net under the water. The agitation of the water as they got nearer caused the strands of the net to become illumined into a golden barrier. Frightened as the fish were, instead of turning back at this barrier, they leaped out and over, hundreds of them striking the upright net above the dugouts and falling captive into the canoes. It was a never-to-be-forgotten sight and we sat about the campfire with the natives far into the night and listened to their songs and stories and watched the Southern Cross seeming to pivot from left to right on the southern horizon.

Our stay in beautiful Montega Bay was all too short and we again resumed our tramp, retracing toward the South Shore. On the way we saw a most amusing sight—a home made merry-go-round in action. The native builder, owner, manager, and cashier was pushing against a crude cross piece, going round and round. We watched for some time; children and grownups laughing, screaming, singing, and having the time of their lives.

Finally Julian asked the man if we could ride and he said "Yes, for a quatty apiece." (A quatty is about three cents.) Here was a chance for a picture, for that was all we wanted. I got on and Julian took my picture, then I got off and took Julian's. We paid the man and thanked him and started to leave, when he called after us, "But Massa, you haven't had you ride out." We asked him how long we could ride for the quatty and he said, "One hour, Massa." He was astonished that we had had enough in the few turns and we gave our seats to two happy children standing close by.

The season before I had been so anxious to see the results of my pictures, I attempted on the two occasions after returning to Kingston to develop them there. I knew the heat and humidity would be a serious detriment but I se-



ENTRANCE OF THE BAT CAVE IN THE COCK PIT COUNTRY



JOHN BURROUGHS' BED ROOM AT SLABSIDES



JOHN BURROUGHS' HAND



WEST INDIANS MAKING FIRE WITH STICKS FROM A PIECE OF BAMBOO

OBI
WITCH STICK

cured some ice and tried to cool my chemicals. It was of no avail; I spoiled them all. Therefore on this trip with Mr. Burroughs I used Seeds gilt edge 8 x 10 plates and I carried a changing box. Each dozen plates after exposure was placed in its original box. Fortunately I put the plates face to face film side in, and carried them in dress suit cases, intending to develop them immediately on returning to Philadelphia.

All went well until one day on ship board. We were passing through a sudden storm at night and the port holes were open in my stateroom. Suddenly there was a crash and commotion. I awoke to the fact that my room was being flooded with water. My precious plates were in their cases under my berth and were being submerged in salt water. I rescued them, but all too late. They were all literally soaked. Before reaching Philadelphia, they were dried out and caked with salt.

My optimism did not fail me, however, for on my arrival I talked it over with Innes and we took them to William H. Rau's splendidly equipped studio. There we submerged the plates, box and all, in pure water. After they had soaked for an hour, with frequent changes of water, we removed the boxes and to my relief we found we could slip the plates apart without disturbing

the films. After this we developed them, and nearly all were perfect. I realized that after these troubles and experiences the best thing to do was to copyright them. This I did, and for years have used them in my lectures.

My pictures of Mr. Burroughs I prize highly and as I look over them from time to time they bring back that memorable trip and I realize the privilege I had in the association with this wonderful man. It gives me great pleasure after all these years to share them with the public, especially with those who have read his interesting and charming books. No one could follow his pages without realizing that here was a seer of nature, a gentle soul, surely atuned to the infinite. His beautiful and useful life will live forever through his books.

X.

A VISIT TO PARIS

A VISIT TO PARIS

MY sister-in-law in Paris who has charming drawing room affairs said I must give one recital for her and she would invite only the most interesting people. Yes, I consented and it was the wee hours of the morning before I finished, and many indeed were the interesting personages there. But most friendly of all was the Duc de Choiseul who spoke excellent English and who insisted that I must come to his house the next night to dinner and he would have there the greatest artist in all Europe and we could be alone. He would not tell me who the artist was but I was persuaded to go.

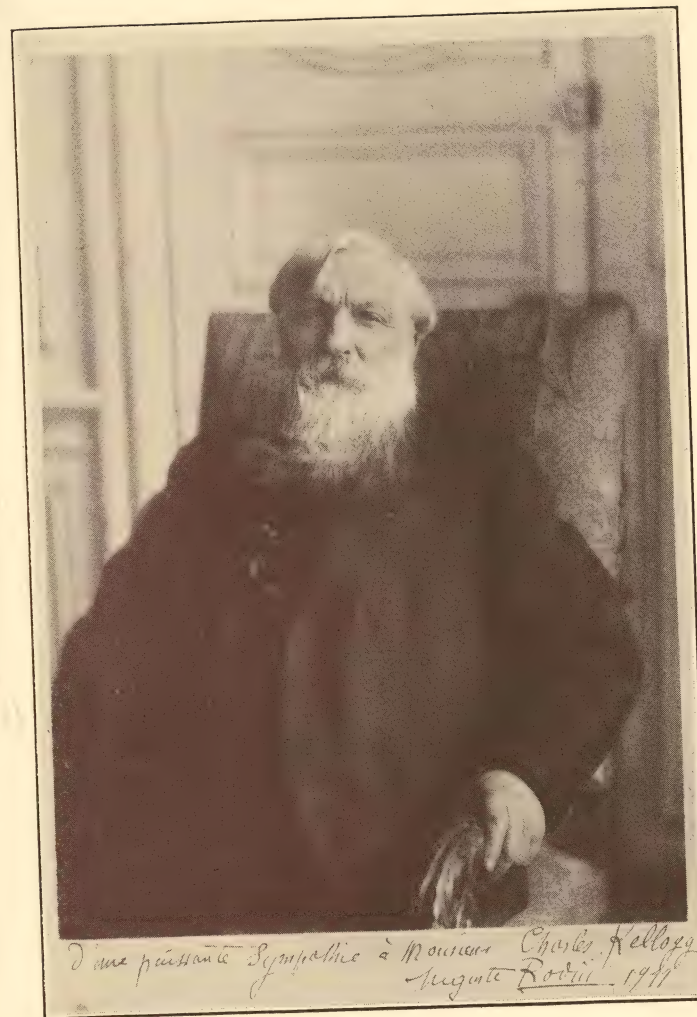
The next evening when the doors were opened

into the drawing room, a stocky, venerable, old man with a cape and shawl about his shoulders was announced—Monsieur Auguste Rodin. He could speak no English and I no French, but simultaneously our hearts went out to each other and a marvelous evening was spent. I do not remember a thing about the dinner. When he left, I had promised to go to his studio the next afternoon. On leaving I learned that this was the first time in several years he had broken his rule never to go out of an evening. The magic word California had helped, I guess.

The visit to his studio lasted many hours and I dined with him alone while his old butler like a large shadow waited on us by candle light.

His studio was in one of the abandoned convents. Everywhere, in many rooms, were pieces of his work and studies. A picture I shall never forget as he lead me from room to room holding up the candle for me to see here and there the interesting studies and statues, and all the while he was totally unconscious of the candle wax that was running down his fingers and arm.

We seemed to have no difficulty in understanding each other, and every once in a while he would look at me and say with a funny accent, "Seing, seing, pleeze," and instantly I would sing, feeling no embarrassment. As a rule I can-



*Une puissante Sympathie à Monsieur Charles Kellogg
Auguste Rodin 1911*

not unceremoniously sing for grown-ups—with children I can always sing freely.

The following day I promised to return and sing out in the garden.

When I arrived he was alone as on the previous visit and I felt so happy for then I knew I could sing with all my heart in such a natural environment. The garden was at least a half acre in extent, full of bushes, trees, shrubs, and flowers, with quite a few birds singing. I had no difficulty in calling the birds and receiving their responses, all of which enchanted Rodin.

We were finally interrupted and I understood after considerable pantomiming that I was to hide in the bushes. Soon I saw through the branches a most distinguished looking gentleman on the terrace talking with Rodin. They were evidently talking about birds and I did what I knew the dear old man wanted—I sang and sang.

With the two coming nearer and nearer, and the visitor becoming more and more excited as I sang the full song of the mocking bird, Rodin clapped his hands delightedly and called out, "Monsieur Kellogg, Monsieur Kellogg." I came out and the look of astonishment on the face of the visitor was comical.

I was presented to Sir Murrey Scott and was

charmed with his cordiality. Rodin knew that he was considered an authority on birds and this was his way of having fun. Sir Murrey interpreted for me and we had a delightful afternoon.

Yes, I accepted an invitation to visit Sir Murrey at his chambers the next day to see his collection. Just collections, I knew I would not be interested in, but the man Scott, I wanted to know more. My sister-in-law told me Sir Murrey had the greatest private collection of art treasures in the world—the Wallace Collection.

I spent several hours the next day in the immense rooms where Sir Murrey lived. He showed me the famous tapestries and hundreds of beautiful carved pieces of furniture, clocks, and a thousand and one other things. He asked me what I thought of them all. I replied that my craftsman sense stood in awe of such forms of beauty but that after all, these were but pictures and models of what I had in reality in my forests—the birds and trees and creatures themselves.

When I left Paris, I was delighted to receive a farewell from Rodin—his photograph with a kind message autographed.

XI.

THE TRAVEL LOG



THE TRAVEL LOG

THE TRAVEL LOG

AT Spanish Ranch my play house was a hollow sugar pine. These magnificent pines are often three hundred feet high and thirty feet around. The pure white resin that exudes can be eaten like lump sugar and is much sought for by the Indian children. On the outmost tips of the wide-stretching branches hang large cones often two feet long, giving to the tree a fine and gay appearance like a Christmas tree. They grow only in the high mountains. Later I came to know the giant redwood trees that grow only near the sea.

When I came down from my mountains and first saw lumbering and all the terrible devastation going on in the forest, I was heart broken.

I felt I must find a way to picture the greatness and beauty of these forests to all the world, so all could help in saving them. Since all the world could not come to the forests, I kept thinking and thinking through many years how to take the forest out into the world. I knew that slabs of the bark of the redwoods had been put together to look like a section of the trunk and shown at expositions, but I wanted the real thing.

How to get out a section of the trunk and fashion a log cabin from it seemed problem enough. But where to find a truck capable of carrying such a load? For it must be remembered that these trees are monstrous, so even a short section would be a tremendous weight.

One day at the beginning of the war, I saw a military truck pulling a terrific load out of a mud hole with such ease it looked to me like a miracle. I knew I had found what I wanted. It was a Nash Quad.

Within a week I was on my way to Kenosha, Wisconsin, where I met Mr. Nash, who entered heartily into my plans. The plant was rushing every hour, night as well as day, to supply the government with these fine trucks. No private orders could be filled. But Mr. Nash was an idealist, and he saw my vision of the redwoods.

Within two weeks a Quad was shipped to my ranch in California.

At Bull Creek Flat is the most magnificent stand of redwood trees in the world. Picture it! More like monuments than trees, their bowls arch out of the earth thirty or forty feet in circumference, and the trunks taper without a flaw three hundred feet and more—rows upon rows of these giant columns in their perfect taper. No branch grows for a hundred feet, and even then there are not many, and the foliage is delicate and feathery. During the rainy season when the bark is wet, the color of the bark is a purple rainbow, glowing in the deep serrations like a red fire. There is no underbrush. The floor is beautiful with wild flowers, mosses, and ferns. It is always twilight there but shafts of sunlight come through here and there. It is not like other forests; the atmosphere is so still, so cool, and refreshing. Like another world where one could walk under water. It was from this forest I must take my log.

From my ranch in the Santa Clara Valley it is three hundred miles to Bull Creek Flat in Humboldt County. I knew my work would take me all summer so I made a covered wagon with full camp equipment and mounted it on the truck. All along the way my purpose was known and I

received God speed and good luck from city, town and village, and the mountaineers gave me unstinted hospitality.

At Scotia, in the heart of the Humboldt mountains, the manager of the Pacific Lumber Company turned out to be a genuine forest lover and devoted friend—Mr. Donald MacDonald. On the bank of the Eel river he established our camp for us seventeen miles south of Scotia, and there we spent three happy months.

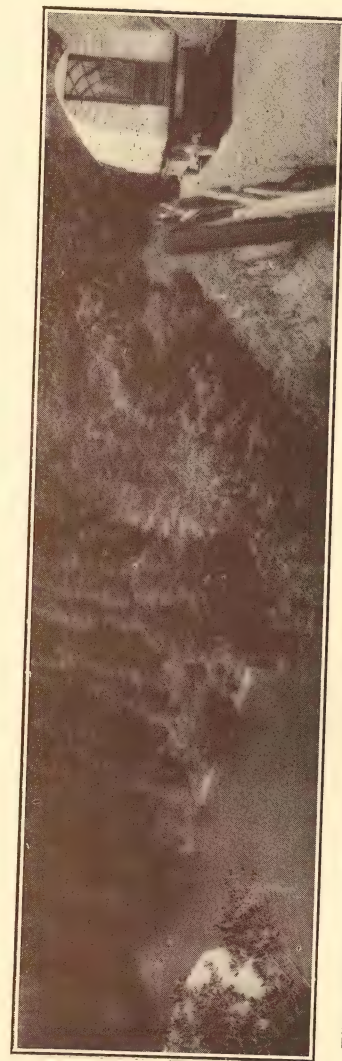
Mr. MacDonald also gave earnest thought to finding an experienced woodsman who would enter into the spirit of the project. We motored through the forest quite a piece down the Eel river and on the river bank came upon the neatest little cabin, where an old fellow, Tom Robinson, lived all alone. He was a tie hewer, making his living by splitting railroad ties. Mr. MacDonald said Tom was just the man if we could get him to come. At first Tom seemed delighted with the idea and then without any explanation he turned it down and said very decidedly he wouldn't come. Mr. MacDonald said, "Come now, Tom, we are offering you double what you are making tie-cutting; there must be some reason—now what is it?" Tom looked up and down the river and did not speak for some moments. Then looking from one to the other, he said sheepishly,



MAKING THE SECOND CUT—A 22 FT. SECTION WEIGHING 36 TONS



SHAPING UP NICELY



EEL RIVER
ENTERING THE
FOREST AT
BULL CREEK FLAT



LEAVING THE
RANCH IN THE
SANTA CLARA
VALLEY FOR THE
HUMBOLDT
FOREST

"The truth is I don't know what to do with the cat." Instead of laughing we sympathized heartily with him and this completely won Tom. We suggested taking the cat with us, but Tom said no, he would leave the cat with a friend, another tie-hewer, who lived just beyond in a cabin like his and "the cat could go home nights"! The next day Tom came paddling down the river in a red-wood dugout with his tent, cooking outfit and ax. He was a fine character and the whole three months he was a faithful and intelligent helper.

I had decided that a twenty-two foot cut would make about the right length for a log house body. The tree Mr. MacDonald assigned to me was lying on the ground. How long it had lain there no one could tell. An old mountaineer told me he had cut a way through the branches at the top so he could drive his team through sixty years before, and yet it was soaking wet clear to the heart. I thought it very generous of the lumber company to give me a tree that had \$2000 worth of lumber in it.

A mathematical friend from Boston Tech who spent a week with me figured that a section twenty-two feet by eleven would weigh thirty-six tons, and if hollowed out and worked down to a four-inch shell, it should weigh eleven tons. I knew that after fashioning it into the shell I

could leach out a ton or two of weight by placing sprinklers inside and out. My theory proved correct, for I afterward did succeed in lessening the weight in this manner until it weighed eight tons.

I began my project by making a cut off the root end of the tree, taking an entire day for the one cut, using a fourteen-foot one-man saw. In sawing a giant log of this size two men cannot keep up the necessary rhythm. The bulk of the tree prevents them from seeing each other from opposite sides, therefore a thin, narrow, vibrant saw is always used by one man, and he usually works from a spring board.

In making the second cut I had to make an extra three-foot cut—bias. This made a wedge, shaped like a piece of pie. Without doing this it would have been impossible to roll the log cut out of its position without its binding.

Using cables with the Quad, I rolled the giant piece over onto three large sleepers. After scribbling out my plans, I began adzing off the top, which was afterward to be the bottom. When this was completed, I again gave the log a roll, pulling it over with the Quad, and adzed first one side then another and finally rolled it over once more for the roof. The finished carved block was a beauty. The grain was perfect—not

a flaw in the entire piece.

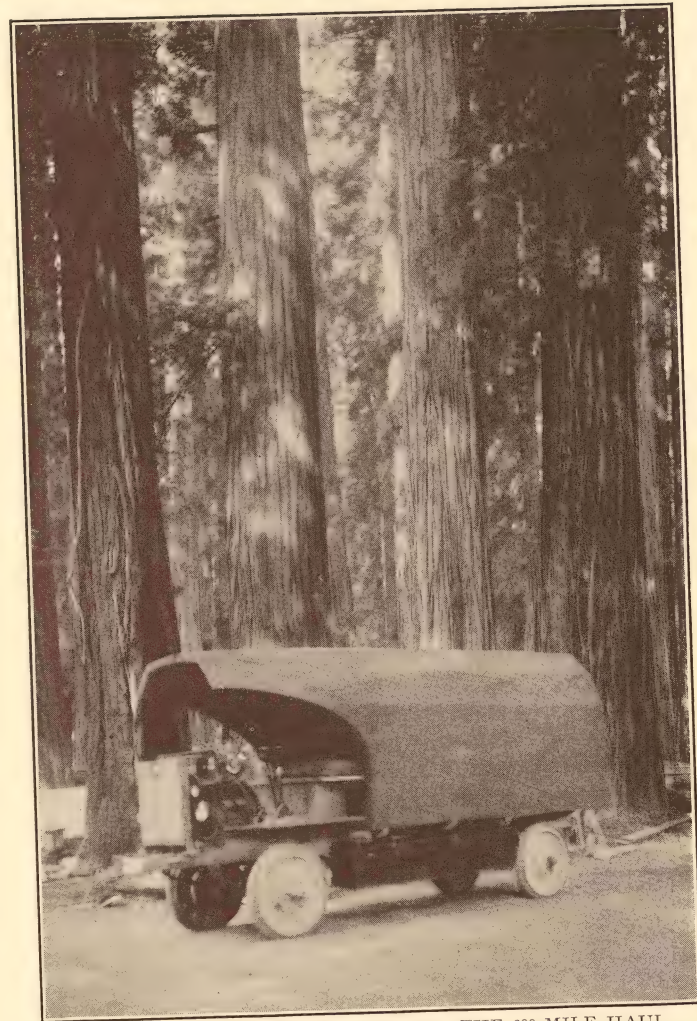
Now the problem was faced how to get a hole through. The log was solid, not even a check. All the lumber men and woodsmen said it would be impossible to chop a hole through. The lumber company suggested an oxy-acetylene flame might burn it, so an outfit was secured. But like cast iron it only charred over and would not burn in a quarter of an inch. Then the lumber company at Scotia tried out a twenty-four foot bit and ten horsepower gas engine to bore through. Fortunately they tried out what this would do to redwood at the shop and mill at Scotia, and so saved the seventeen-mile haul to my camp. Their efforts were a failure, as every kind of bit they tried only ragged it up and they could get in but four inches with a three-inch bit.

Meanwhile I had been thinking. I was very grateful for the wonderful interest and help from the lumber company, but I have my own ways of doing things and I began experimenting with a twenty-five foot length of $\frac{3}{4}$ -inch water pipe. Using it as a ramrod, I hoped to batter through from end to end. Of course I knew a pipe like that would buckle when pressure was used. So I conceived the idea of binding it onto a split timber—three-by-three by twenty-five. I placed one end against the bumper of the Quad and the

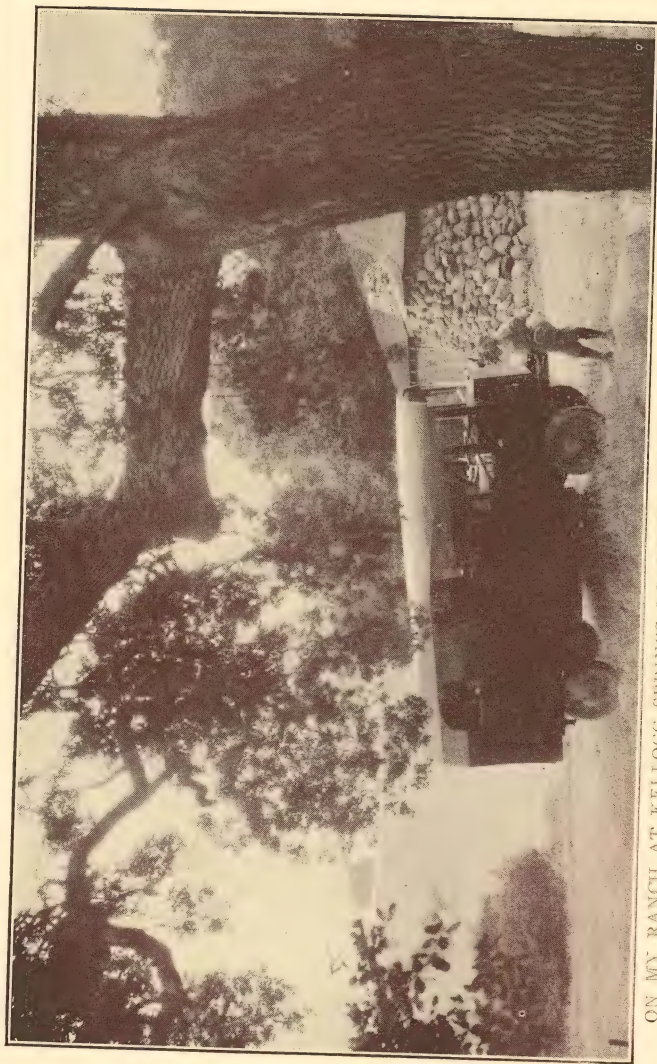
other against the center of the log. When ready to make the ram with the Quad, I cut off six inches of the timber next to the log, leaving but six inches of pipe projecting toward the tree. My first trial showed that it would work. At the first push the six inches went in up to the end of the three-by-three timber. Then I cut off six inches more of the timber and again rammed. This I kept repeating until I succeeded in pushing the pipe entirely through. Driving the Quad around to the further end, I fastened the chain with half hitches about the pipe and withdrew it, using the Quad to pull.

Back and forth with the Quad and chains, time and time again I did this until I had made a circle of holes around the heart and battered the core out. Finally with a larger timber of pepper-wood, the core, about a foot in diameter, was rammed out. Day after day I used the water pipe and timber. Redwood splits perfectly even with the grain, so the ram often tore out huge pieces the whole length of the log, weighing several hundred pounds. At last the hole was large enough to crawl into.

Lying on my back with the adz I began the task of chip by chip carving out the interior. It took many weeks and my muscles that had ached at first became hardened and I enjoyed every



MOUNTED AT LAST AND READY FOR THE 300 MILE HAUL
BACK TO THE RANCH



moment for I knew I was succeeding.

The day finally came when the great log shell was finished and ready to mount onto the Quad. Naturally the thing to do would be to jack it up and back the machine underneath it. Mr. MacDonald brought down four men and several great log jacks used only in logging great timber. After planning and chocking the entire day, not one inch could we get it up off the ground. Every piece of bare footing we put under our jacks, they would squash into the untold depths of forest leaf mold, and the shell stayed where it was. Next day I thought out a way. I dug a trench under the shell—the sleepers resting across the trench. Then I backed the machine underneath. With an ax I chopped off the sleepers and the shell slowly settled onto the frame of the Quad. The great weight literally buried the wheels into the earth.

I shall never forget the misgivings I had as I sat inside to drive it out of the trench. I could only see out as though looking through a port-hole. Fortunately I was not excited and did not speed up, but quietly, in lowest low, with all four wheels pulling, I crawled out of the pit as though I were a giant turtle. As soon as I had it on solid ground, I stopped the machine, got out, and to my surprise I was so weak I could not stand—I

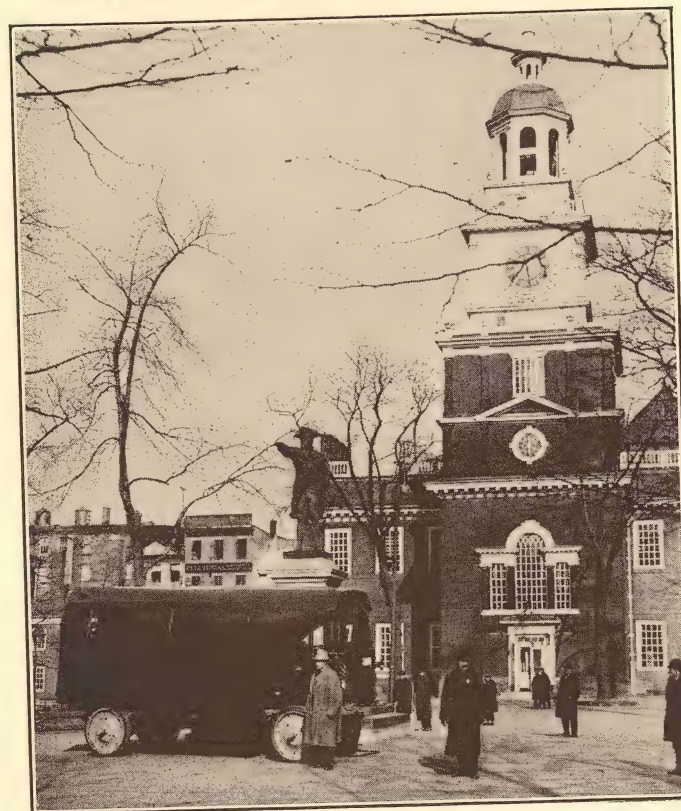
had to lie down. During the next days I sawed off two feet of the visor and adzed out an inch more of the floor bottom and as much as I dared of the sides. This considerably reduced the weight.

At last with the log mounted on the Quad in the rough shell shape I hauled it back to my ranch at Kellogg Springs. Here I dismounted it and placed it upon cribbing, bored two holes in the bottom, covered the ends with canvas and placed a large whirling lawn sprinkler inside. This I kept constantly going for four weeks. Meanwhile, pouring from the holes in the bottom the water came out the color of black coffee. By this process I leached out many hundred pounds of sap.

For years I had been gathering choice planks of burl redwood to be used for the cabinet work inside the log. But the prize of them all was a great slab sixteen feet long, five feet wide and four inches thick—solid burl, almost priceless. This magnificent piece had been seasoning for four years and was a precious possession of Mr. MacDonald's, and he made it a gift to me. He said he felt no greater or finer publicity could be given the redwoods than by exhibiting it as part of my log. The burl was measured to fit the open ends of the log, and now two great doors must be



ZERO AT CLIFTON SPRINGS, N. Y., YET SNUG AND WARM



INDEPENDENCE HALL, PHILADELPHIA

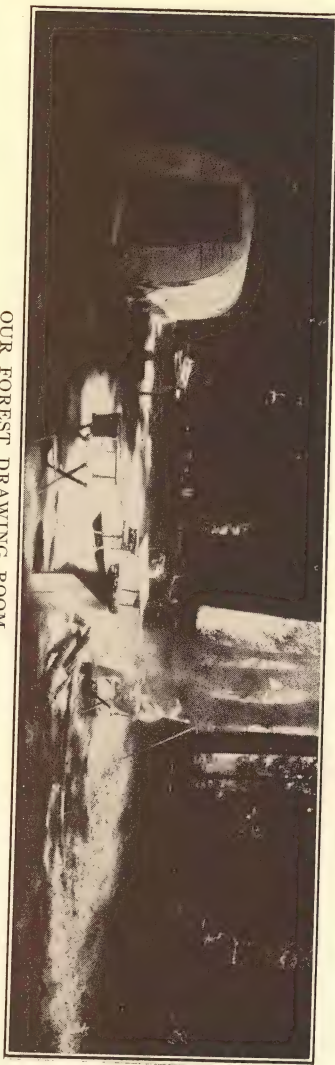
sawed out to fit the arched ends.

No one at the mill would take the responsibility, so I had to undertake it. It was a ticklish job for it had to be measured—sensed—with the eye. The doors when finished weighed four hundred pounds apiece and looked like the great doors in one of the Mission churches. Waxing brought out the grain that rippled and swirled like watered satin.

Here on the ranch I completed the cabinet work and then began the great task of waxing the entire body inside and out. With my hands I rubbed quantities and quantities of wax into the wood. This brought out the beauty of the grain and did not change its unusual color of deep rose red.

I first placed the log on exhibition at San Francisco and then drove it the following week to Los Angeles. There began its theatrical and Liberty Loan career, from coast to coast and lasting for four years. Everywhere the log was received with enthusiasm. Everywhere I talked and showed my pictures and sang my bird songs to "Save the Redwoods". After all these years I have the joy of seeing this purpose in a fair way to being accomplished. Bull Creek Flat is already saved—forever an unparalleled playground for the people. The "Save the Redwoods

OUR FOREST DRAWING ROOM



LIBERTY LOAN DRIVE AT ROCHESTER, N. Y.



League", of which I am a life member, is continuing its work with headquarters in the University of California.

Here at the ranch the Travel Log rests now under the great oak tree, protected by a pergola soon to be covered with vines and flowers. Just as I lived in it for years it remains intact, a Redwood museum for all to see. Many visitors from far and near admire its beauty and reverence its age.

And now my younger Caravan has come to take its place. It has been called the "Bird's Wing", it is so trim and light and speedy. Here I live inside my Bird's Wing, surrounded by all the things that make for convenience and comfort. Up and off at a moment's notice. I go where I please, stop wherever I like. One week I am at the sea shore, the next in the high Sierra by the side of a beautiful lake or stream, and again in the painted desert.

Some one has said, "Hurry is the Devil". I've associated with this cloven-footed fellow, yet I am able every year to get away from him at least nine months out of the twelve. I have my Bird's Wing for service and for locomotion to the far places. But my hurried days are over. My old friend of years ago, John Burroughs, says in his most beautiful poem, "Serene I fold my hands



AT COLUMBUS CIRCLE, NEW YORK CITY

and wait." However, I still find things for my hands to do, and with the sun-rise I am up and doing, "sure my own will come to me."

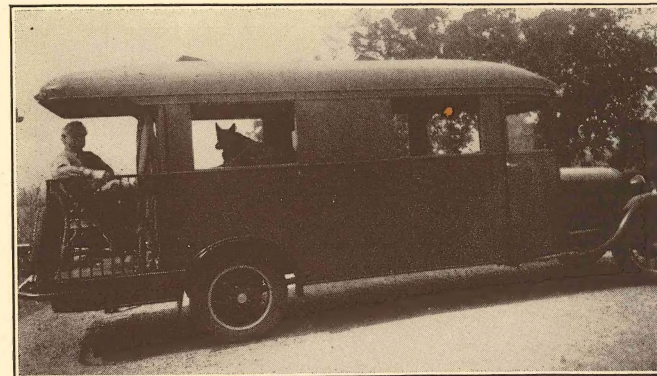


MAKING A CALL ON MR. NASH



THE TRAVEL LOG WAS ABLE TO ENTER WITH JUST AN INCH
TO SPARE

THE END OF THE TRAIL,



THE BIRD'S WING



INTERIOR OF THE BIRD'S WING



THE END OF THE TRAIL
WATER CASCADING DOWN OVER THE ROCKS AND A LITTLE BROOK
RUNNING ACROSS THE HEARTH

THE DREAM COME TRUE

WATER coaxed from the hills. The rocks, the stones, the pool, the buildings—all fashioned with my own hands.

Leisure to work, to read—commune, enjoy true neighbor friends.

Unhurried busy days, the quiet evenings, the great log burning, the little brook running down the rocky side in the fireplace and across the hearth.

My faithful dog, and best of all—"The Angel in the House."

Richard Jefferies P. 125

CHARL
KELLO
THE
NATURE SINGER
HIS BO

CHARLES KELLOGG
THE NATURE SINGER
HIS BOOK



PACIFIC SCIENCE
PRESS