

They traveled in 439 cars, and among these were represented 36 different makes. The passengers came from practically every State in the Union. In dozens of other small cities the same performance was being repeated all summer long.

In a number of the larger cities, on the other hand, the attendance mounts up so fast that after a while the census takers seem to get tired of keeping track of it. Denver, for example, is unable to give exact figures, but a rough estimate of the number of tourists camped in the city camping grounds during the months of June, July, and August is given as twenty thousand.

National Park records tend to prove that such a figure is no exaggeration. Last summer, if you please, there were some 35,000 motorists camped out in the Yellowstone National Park. It happens that the Yellowstone has fairly spacious hotel accommodations. Old Faithful Inn, together with its permanent camp, has a capacity for more than eight hundred guests. Yet for week after week

there were more motorists camped out in the Park under their own quickly erected tents than there were people in the inn and permanent camp combined.

The Government has been busy installing throughout many of the National Parks and Forests much the same sort of motor camping accommodations



"THE MOTOR CAMPERS' TRAIL . . .  
LEADS TO BETTER CITIZENSHIP, GOOD  
CHEER, HEALTH, AND HAPPINESS"

that are to be found in the Western cities. In the Yellowstone there are at present ten of these with stone fireplaces, garbage-disposal pits, piped water where necessary, and similar conveniences. Forty more are planned. Horace Albright, Yellowstone Park Superintendent, says that last summer in Upper Geyser Basin, near Old Faithful Geyser, a single camp ground of this sort was occupied each night for weeks by from eight to twelve hundred people. This general situation applies in large measure to other National Parks. The Yosemite, for example, was visited by 25,000 campers.

Is it necessary for me to perorate upon the recreational and educational value to America of such a wholly fortunate situation? I hardly think so. The thing is too obvious. I only urge you to hit the motor campers' trail. Whether it leads north, south, east, or west does not matter greatly. Whatever the direction may be, it leads to better citizenship, good cheer, health, and happiness.

## SET YOUR VACATION BY THE MOON SOMETHING FOR CITY DWELLERS TO THINK ON

BY H. A. HARING

**I**N selecting the time of your summer outing for 1921 why not put the light of the moon into the middle of it?

In the city we have street lights. They supply illumination. They displace the need of moonlight. The ordinary vacation is spent away from the city. If the moon happens to be in its dark phase, every evening of the fortnight will be lost in darkness.

Our grandfathers regulated their planting and much of their social life by the phases of the moon, a custom which appears to us wholly irrational. Their method of timing important events was not entirely due to their belief in signs. We often charge them with superstition, and when we do so we are accusing them thoughtlessly, for we fail to appreciate the artificial circumstances of our own living. They lived much in the open; we, little. Small wonder, then, that we have ceased to regulate life's actions by references to lunar cycles.

So firmly established is our habit of thought that we do not even consult the moon in fixing our outings, the one period of the year wherein moonlight becomes of consequence to us. If a vacation has fallen into the light of the moon, the most pleasant recollections of the summer are quite likely to relate to moonlight. How often does one return from a vacation resolved that before the next outing rolls around he will read enough astronomy to know something of the stars and the moon! This is merely because the vacation transported a city person to the country, to lake, or to

mountain, where the roofs and smoke of the city are lacking. Each night out in the open has revealed the beauty of the heavens, there to be viewed with surprising clearness.

To plan a vacation with reference to the full moon is a simple means to double the delights of the outing. The surprising thing is each year that apparently so few people even take the moon into consideration in their planning. If chance has brought the fortnight happily into conjunction with the moon, delight is unbounded. But why not deliberately bring the two together? It can be done merely by consulting the calendar.

For about three nights immediately preceding the time of the full moon and for about two nights following, the moon is so nearly rounded out that an observer must be experienced to distinguish just which is the night of the full moon. Thus there are each month five or six evenings when it is possible to enjoy what is, practically, a full moon. For almost a week before this full phase is reached the first quarter grows lighter with each evening. It gives sufficient light to enjoy mere gazing at the sky, and for doing the usual moonlight things of the outdoor world.

For the year 1921 the moon's phases during the vacation season are here given:

	New Moon	First Quarter	Full Moon
June .....	6	12	20
July .....	5	11	19
August .....	3	10	18
September .....	1	8	17
October .....	1	8	16

A two-weeks' vacation beginning about half way between the new moon and the first quarter is ideal. The moonlight will be enough to be out of doors from the first night of such a vacation without requiring artificial light. At the latter half of the fortnight the moon will still be rising early enough, although past the full moon, to give enjoyment before bedtime. The entire two weeks will thus occur in the light of the moon.

It is well to remember that the full moon is not the only phase in which it is beautiful. There is a peculiar charm and dreaminess to be found in the crescent of the new moon, with a large star conveniently near in the heavens. For the first two nights, sometimes for three, of the new moon, a faint circle of light can be detected, outlining the whole of the moon's surface, although its face is wreathed in darkness. This filmy suggestion of hidden mystery is the result of the sun's light falling on the surface of the earth and then being reflected from us out upon the moon.

The surface of the earth is more than ten times as great as that of the moon. Consequently this reflected light of the sun shining on us and then turned back to the moon is ten times brighter than our moonlight. When the moon is "new," so little moonlight reaches us, due to the small extent of the moon's surface exposed to the sun (as seen by us), that this excess of the light reflected from the earth becomes visible on the moon. After the first two or three nights of the new moon have passed, the increased volume of moon-

light bedims our own reflected light. Then the shadowed portion of the moon ceases to be visible to us.

From one full moon to another is twenty-nine and one-half days, the lunar month being the basis of our calendar month. "Moons" were the time units, not only of the American Indians, but of all ancients as well. They are still the units for ourselves, we merely having modified the word "moon" into "month," and, forthwith in our practical way, having forgotten the significance of the word.

On the average throughout the year the moon will rise each evening forty-eight minutes later than on the preceding night. This average interval is subject to wide variations, being greatest in March and least in September. In September these intervals become about fifteen or twenty minutes. This means that the full moon of September 17, 1921, will rise each evening only about twenty minutes later than on the preceding evening.

As a result of these short intervals in

September, we have each year at the time of the September full moon six or eight evenings in succession when the moon shows its face almost full. Its rising hour for each of these nights is such that the early evening is filled with soft beauty. "Harvest moon" is the almanac name for this occurrence, a poetic name, but one not at all equal to the entrancing silver beauty of those evenings. Just to be out of doors, in the balmy warmth of a September evening, during these six or eight days, is a vacation in itself.

Who has not, in romantic mood, looked at the "Man in the Moon"? One of the ancients, Plutarch, wrote a whole book on the "Face of the Moon," and unnumbered others since his day have mooned away hours gazing at the same reflection.

When photographed, the features of the face are not so good. It is, in fact, only with some difficulty that we can then distinguish the face at all. Examination of the photograph makes us realize that the face is largely a fancy

of our imagination. In reality, the surface of the moon is of dazzling whiteness, with clear-cut shadows. The alternating light and dark are caused by the elevations and depressions of the moon's surface, called, for convenience, the mountains and the seas of the moon. In the geography of the moon, the old man's nose is the main ridge of the "Apennines of the Moon." The mountain chain terminates with Mount Copernicus, which we in our fancy picture as the tip of his nose and the nostrils. His eyes are two seas, his mouth another sea, long and irregular in shape. Other fanciful figures to be distinguished on the moon are the Girl Reading, the Lady, the Crab and the Donkey. Given the right mood, it is possible to imagine almost anything as being there pictured.

If a vacation is planned so as to time it to the light of the moon, it will be easy to believe that the moon was set in the firmament merely for the delight of man.

## WITH ROOSEVELT AT PINE KNOT

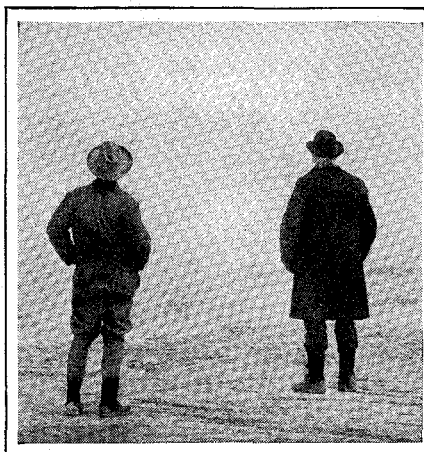
BY JOHN BURROUGHS

I was in May during the last term of his Presidency that Roosevelt asked me to go with him down to Pine Knot, Virginia, to help him name his birds. I stayed with him at the White House the night before we started. I remember that at dinner<sup>1</sup> there was an officer from the British army stationed in India, and the talk naturally turned on Indian affairs. I did not take part in it because I knew nothing about India, but Roosevelt was so conversant with Indian affairs and Indian history that you would think he had just been cramming on it, which I knew very well he had not. But that British officer was put on his mettle to hold his own. In fact, Roosevelt knew more about India and England's relation to it than the officer seemed to know. It was amazing to see the thoroughness of his knowledge about India.

The next morning we started off for Virginia, taking an early train.

Pine Knot is about one hundred miles from Washington. I think we left the train at Charlottesville, Virginia, and drove about ten miles to Pine Knot; the house is a big barn-like structure on the edge of the woods, a mile from the nearest farmhouse.

Before we reached there we got out of the wagon and walked, as there were a good many warblers in the trees—the spring migration was on. It was pretty warm; I took off my overcoat and the President insisted on carrying it. We identified several warblers there, among them the black-poll, the red-throated blue, and Wilson's black cap. He knew



JOHN BURROUGHS WAS A COMPANION OF THEODORE ROOSEVELT ON MORE THAN ONE OUTDOOR EXCURSION. HERE THEY ARE LOOKING AT THE GEYSER "OLD FAITHFUL." EVEN THEIR BACKS ARE EXPRESSIVE

them in the trees overhead as quickly as I did.

We reached Pine Knot late in the afternoon, but as he was eager for a walk we started off, he leading, as if walking for a wager. We went through fields and woods and briers and marshy places for a mile or more, when we stopped and mopped our brows and turned homeward without having seen many birds.

Mrs. Roosevelt took him to task, I think, when she saw the heated condition in which we returned, for not long afterwards he came to me and said: "Oom John, that was no way to go after birds; we were in too much of a hurry." I replied, "No, Mr. President, that isn't the way I usually go a-birding." His

thirst for the wild and the woods, and his joy at returning to these after his winter in the White House, had evidently urged him on. He added, "We will try a different plan to-morrow."

So on the morrow we took a leisurely drive along the highways. Very soon we heard a wren which was new to me. "That's Bewick's wren," he said. We got out and watched it as it darted in and out of the fence and sang.

I asked him if he knew whether the little gray gnat-catcher was to be seen there. I had not seen nor heard it for thirty years. "Yes," he replied, "I saw it the last time I was here, over by a spring run."

We walked over to some plum trees where there had been a house at one time. No sooner had we reached the spot than he cried, "There it is now!" And sure enough, there it was in full song—a little bird the shape of a tiny catbird, with a very fine musical strain.

As we were walking in a field we saw some birds that were new to me. Roosevelt also was puzzled to know what they were till we went among them and stirred them up, discovering that they were females of the blue grosbeak, with some sparrows which we did not identify.

In the course of that walk he showed me a place where he had seen what he had thought at the time to be a flock of wild pigeons. He described how they flew, the swoop of their movements, and the tree where they alighted. I was skeptical, for it had long been thought that wild pigeons are extinct, but that fact had not impressed itself upon his mind. He said if he had known there could be any doubt about it, he would

<sup>1</sup> Mr. Burroughs's memory played him false here. The incident he speaks of was at a dinner in the White House, just before starting on the Yellowstone trip, in 1903.—C. B.