

Desert Sign Posts Herald Reclamation of Vast Area in Southwest

Skeletons Scattered Along Trails Emphasize Need of Markers for Guiding Travellers to Water Holes Hidden by Nature

DEATH stalks boldly abroad upon the so-called desert regions of the United States—an area of substantially 570,000 square miles—in southeastern California, southern Nevada, and a part of Arizona lying adjacent to the Mexican border. This region is crossed at various widely scattered parts by the ribbed paths of certain of our great trunk lines. In between these highways of steel are vast arid stretches, in parts quite barren of vegetation, which are sparsely inhabited by types of living creatures so constituted that they can in large measure be indifferent to an awful scarcity of surface water.

From time to time interest has been aroused in this far flung area of distressing dryness because of its mineral wealth, and the potential fruitfulness of its soil, if only a union with ample moisture could be effected. Now the region takes on a still newer aspect, one owing to the ever widening reach of the automobile and the motor truck. The latter, inevitably, is bound either to follow the routes already blazed by the railroads or to open up new paths across this parched no man's land that stands squarely alight the otherwise easy approach to the luscious farms and orchards of Southern California.

Tragedies and Hidden Water Holes

The Government's train of motor trucks at present crossing the continent from east to west, and kindred but less pretentious demonstrations of the motor vehicle's endurance, all point to that day when traffic of this sort will become commonplace. Convenience and the urge of commerce will not permit the desert to deter wheeled traffic. But neither man nor machine can get along without water, and it therefore follows that the traveler by these newer agencies of transport must either carry an ample supply to tide him over scores upon scores of miles or nature's scattered oases or water holes must be marked so that they can be found where they lie for the most part concealed.

The need of this is not a new born realization. Time and time again a lack of knowledge of where hidden water lay has been emphasized by the grim bare bones of human victims scattered along prospectors' trails and not infrequently these sacrifices of life have occurred within short distance of a succoring spring or well. The tragedy of an all consuming thirst in an arid stretch of our desert section, and repeatedly during the fairly recent building of the San Pedro, Los Angeles and Salt Lake Railway the blanched skeletons of thirst crazed wanderers were found in groups close to sources of water which they had missed, all because of an absence of guiding marks of man's engineering.

Work has been done in the direction of supplying these needed desert sign posts, thanks to the initiative and the persistence of George Whitwell Parsons, to-day of Los Angeles, but more must yet be done to offset the perils of the vast arid area, especially if we are to tap this treasure house of mineral wealth and transform it to a large extent, as Mr. Parsons believes possible, into a great garden susceptible of yielding immense quantities of foodstuffs. This is by no means a fanciful dream, because it is a well known fact that soil of similar chemical composition in parts of Arizona has produced such crops after the institution of irrigating systems.

Congress Aroused at Last.

But the desert sign posts which the efforts and propaganda of Mr. Parsons have brought into being were not planted until after he had appealed convincingly to the public-spiritedness of Californians and finally won to his cause our national legislators. The authorities in Washington were a long time in recognizing the Government's responsibility to the pioneers, the prospectors who were risking their lives in seeking nature's mineral treasures. The California Legislature appropriated \$5,000 for the erection of desert sign posts directing to water supplies in the two principal desert regions, comparatively 40,000 square miles, within the State. This was a start, comparatively short while after Mr. Parsons made the situation plain, but it was not until August of 1918, after appropriation bills had been introduced unsuccessfully session after session, that Congress authorized the expenditure of \$10,000 to promote the welfare of the traveler entering upon these widespread, inhospitable waste lands.

Agreeably to that act, the bill read: "That the Secretary of the Interior be and he is hereby authorized and empowered, in his discretion, in so far as the authorization made herein will permit, to discover, develop, protect and render more accessible for the benefit of the general public, streams and water holes on arid public lands of the United States; and in connection therewith to erect and maintain suitable and durable monuments and sign boards at proper places and intervals along and near the customary lines of travel and over the general area of said desert lands, containing information and directions as to the location and nature of said streams and water holes, to be readily traced and found by persons in search of and ready means, apparatus and appliances by which water may be brought to the earth's surface at said water holes for the use of such persons; also to prepare and distribute charts, maps, reports and general information relating to said streams,



THE BONES OF TWO THIRSTY VICTIMS, FOUND WITHIN HALF A MILE OF WATER.

streams and water holes and their specific location with reference to lines of travel."

Happily, for the advancement of these essential operations, George Otis Smith, director of the United States Geological Survey, for years has been interested in Mr. Parsons' work. Therefore he called the latter to his aid in this wise: "In view of your long study of this matter and of your intimate acquaintance with desert areas, I shall be glad to have suggestions from you. To what extent should the work consist of installing pumps or other devices for getting water to the surface, or in sinking shallow wells? What types of sign posts do you recommend as most permanent and otherwise most suitable for the desert?" Mr. Parsons gave the director just the sort of information most desired, and the survey and other activities were promptly taken in hand.

"A reconnaissance of conditions affecting ground water in the desert region was carried on in connection with the survey of watering places, and a considerable part of the regular allotment for ground water investigations was therefore used in this project in addition to the sum specifically appropriated for the survey of watering places." So we are informed by the last annual report of the United States Geological Survey, Director Smith has amplified this record of progress in the following manner:

"The region that has been covered lies in southern California and southwestern Arizona. In California it includes the Mojave Desert, the southern part of Death Valley, and adjacent regions. In Arizona it includes the little known and sparsely settled region west of Tucson and Phoenix and south of Wickenburg and Parker. It was selected not only because it is in the driest, hottest and least explored part of the desert area, but also because of the strategic importance of obtaining information on the water supplies along the 350 miles of national frontier that it includes." That is to say, the country immediately north of the Mexican border line.

Continuing, Mr. Smith says: "The entire region that is so arid as to require guides to watering places and sign posts directing to these watering places comprises a fan shaped area covering approximately 570,000 square miles, or nearly one-fifth of the country. The handle of the fan is in southern California; one side is formed by the Sierra Nevada and Cascade Mountains, the other side extends 300 miles

along the Mexican border, while the outer edge is traced by a line extending from eastern Oregon to Salt Lake City and Santa Fe to the mouth of Peos River. The highly developed coastal section of southern California is situated, so to speak, at the handle of the fan, and the railroad and automobile highways that extend eastward and northward from this section may be regarded as the ribs of the huge fan.

"On the basis of work already done it is estimated that the rest of the region can be covered for \$100,000. Obviously the results will be very large for the expenditure involved, and it is highly desirable as soon as possible to carry the project to completion. After the region has been covered by the survey and the setting of sign posts the Government ought to undertake

the systematic development of new watering places."

During the year gone practically all watering places in the region were examined and about 140 samples of water were collected and shipped for analysis to the water resources laboratory at Washington, D. C.



HOW THE INDIANS MARKED THE WAY TO DESERT WATERING PLACES

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"When appeared William Simon U'Ren, who in time was called 'the savior of Oregon.' He was a lawyer, a nurseryman and agitator. In his eyes were great things. Some persons said that he was a political Col. Sellers. Anyway, he knew about Switzerland's application of the referendum, and said that when the people understood a subject they voted on it wisely.



PLANTING A GOVERNMENT SIGN POST IN THE ARIZONA WASTE

Signs directing travellers to water were erected at 167 localities in California and 138 in Arizona. The sign posts are galvanized iron, 1 1/2 inches in outside diameter and 12 feet long. Each post is anchored in the ground with two redwood blocks. The signs are of 18-gauge steel, galvanized, are white, with dark blue letters. They are of two sizes, 18x20 inches and 9x20 inches.

Most of the larger signs, of which 470 were erected, give the name, distances and directions to four watering places; most of the smaller signs, of which 165 were erected, give the names, distances and directions to two watering places. Thus the traveller has a choice of two or more fountains of relief and may seek that well, spring or water hole which lies nearest to his desired route. Because of the height of the posts and the vividness of the white signs these guides can be seen from a long way off.

Mr. Parsons wrote about a year ago for private circulation the story of a thousand mile desert trip made by him and Prof. W. L. Watts. It was this venture into the arid wilderness that led to his agitation regarding the erection of sign posts. His brochure bristles with characteristic bits of local color which bring out in striking fashion the peculiar features of the deserts and the possibilities of reclamation. He tells us:

"Desert air, we discovered, extracts all moisture, drying up shoes and all leather goods in the stores, so that they have to be kept underground and cellars are necessary. Tobacco is too powdery for use unless tightly fanned. It is an extremely hard climate on all wagons and wooden material especially. The dry air gets in deadly work 100 per cent. greater than any swelling in a wet country, so that in

practice, business men retired from business, newspaper men worn out by night work and a superannuated minister, here and there, have come among us and will say, 'That limb should have been cut off last spring,' or, 'The spray missed that branch.' Their language would not interest you, but it interests them, and that's the main thing in this life.

"I go into these details," Senator McNary said, "for the purpose of creating a background on which to place the political opinions that now rule Oregon. We were ready for new things in seeds, cuttings and machinery. New things paid. They made us feel competent and respectable. When one failed we cast it aside, but we didn't lose our confidence in the long category of new things that were good.

"In the meantime we caught the spirit of the merchants and manufacturers who had moved in and who ran their stores and shops on business principles. No big merchant goods into the basement and unboxes goods. No manufacturer hauls the coal that is to run his engine. A smart farmer doesn't feed the pigs or clean the horses. He hired a man to do such work and he works with his own hands. U'Ren, therefore, when he appeared with his programme of strange ideas pertaining to government, was not shouted down. 'Show us your goods,' we said. They looked all right and we found them and, from our standpoint, found them good. The reaction of the country looked about us but that made no difference. So far, we have never voted an amendment into our Constitution that now would be voted out by our people. That's my answer to the sneers and ridicule of Bourgeois and mossbacks who dwell elsewhere."

Senator McNary, Who Calls Himself a "Nut" and Tells Why

"I'm Willing to Try Anything Once," Says He, and This Goes Even for the League of Nations—Oregon, He Adds, Was Made by Daring Men—As Lief Walk as Ride on Government Controlled Railroads

By JAMES B. MORROW.

SEATED in his mahogany chair, his heels resting on the edge of his mahogany desk, Charles L. McNary, blond-haired and blue-eyed, said: "I am a nut."

Which laconicism was half jest and half fact. More truthfully, however, Charles L. McNary could have remarked: "I am a prune." Also he could have stated: "I am a hop," or, "I am a pear," or, "I am a cherry."

Here was an original specimen for the interviewer to investigate and classify. Not only because he had described himself uniquely but also for the reason that he had practically been rumbly up to that point.

And he a United States Senator! the definition of which functionary is often given as being "a person of extraordinary volubility, whose custom it is to arise in his place and talk for hours, seemingly to himself, inasmuch as no one else appears to listen."

"I am willing to try anything once," he said, referring to the league. "So are my fellow Oregonians. But we think matters over first. Then we act. That is the reason our State in recent years has been the pacemaker for the rest of the Union."

Left an orphan at an early age, Charles L. McNary went to live with his sister in Salem. During four summer vacations, while a student at the high school, he worked in a nursery. He says what numerous things could be done with trees and flowers under the hand of a man who understood his business.

It is true that Charles McNary, after two years at Stanford University, read law; that he was admitted to the bar; that he became the partner of his brother John; that he gained a large and profitable practice; that he was elected a Judge of the highest court in his State, and that he is now a Senator in Congress, but Charles McNary all along had been what might be called an incipient orchardist.

"Nut and Fruit Orchards.

In thought, at first, but actually one after he had accumulated money enough to purchase parts of his father's and grandfather's old farms. This he did about twelve years ago. And now he has 110 acres of prunes, 50 acres of walnuts, 28 acres of cherries, 20 acres of filberts, an equal area of hops and 15 acres of pears. Then there are other orchards of prunes that he jointly owns with other men. In short, he is America's prune king.

replied, waving his arms toward the window and making an air map of Washington and the District of Columbia.

"Are the initiative, referendum and the recall of office holders still the hangings of the millennium in the eyes of the Oregonians?"

"The people of our State," the Senator answered, "desire now exactly what they desired when the reforms that you mention were thoughtfully discussed and then deliberately adopted. Not 5 per cent. of our voters would support the proposition to repeal the initiative, the referendum or the recall."

"No State officer, so far, has been recalled, but the law is ready if ever such an act on the part of the people becomes necessary. Oregon has been called an experimental station in legislation. All that I care to say is that the experiments have been successful. Ridicule of Oregon has not changed the facts. It has no effect whatever on the minds of our voters."

"We are not like the people of the East—afraid of the foreigner. Nor like the people of the South, who are in terror of the negro. All of us, practically, are Americans. Therefore we do as we please. Freedom dwells in Oregon. It is the most thoroughly American State in the Union."

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"What do you see in the future?" asked the interviewer.

"A more satisfactory arrangement for those Americans who work," Senator McNary answered. "I am not referring to wages or hours of labor but to opportunity. Profit sharing will become more general. Taxes on incomes will continue. Huge profits, as a consequence, will be discouraged. Inheritances will be more heavily taxed. Why should a father leave millions to his son or son-in-law to be spent in immoral or idiotic practices? Take a good part away from his estate, I say, and spend it for roads, schools and other useful purposes."

The Motor Truck's Widening Reach Gives New Significance to Mineral and Agricultural Possibilities of Parched Lands

reality there should be two sets of wheels, one for dry and one for wet weather, as wheels will be surely dished notwithstanding all efforts and ingenious contrivances to prevent it."

And yet, the very dryness of that air is a positive virtue, apparently, because in the next paragraph this rugged pioneer of the West says: "A wonderful health giving and restoring, lung curing and all ailments healing atmosphere is this bracing desert air, and it would seem as though no ill that flesh is heir to could exist under its benign influence. Humus being simply dry up and blow away." This is probably a fanciful way of saying that they endure indefinitely without physical decay if other vital essentials be at hand to sustain life. If Mr. Parsons be quite correct in this estimate of the curative value of the desert air, it will surely be merely a matter of time before great hotel-like sanitariums are established where to-day the faunal denizens are the scorpion, the lizard, the rattler, the desert turtle and the coyote.

The desert areas are not by any means completely devoid of vegetation, but the growths of course are all of the sort that can withstand the high degree of dryness. We are told: "Comparatively small portions of these great areas are composed exclusively of ravaging and annihilating sand, the larger portion producing innumerable varieties of the cactus family, such as the Joshua or yucca palma, prickly pear and the savage cholla, together with the Spanish dagger, sage brush, mesquite, greasewood and other plants indigenous to arid surroundings where a water supply from stream or rainfall is almost unknown."

However, there must be water underlying wide areas of these desert lands, for otherwise there could be no source of supply for the existing water holes, wells and scattered springs which work their way to the surface and maintain their modest proportions there in the face of the evaporative greed of the atmosphere.

At one stage in his thousand mile exploratory trip Mr. Parsons found it necessary to forward mail to the outer world, and he says: "So an associate, a fine fellow from the University Club, New York city, who was on our long and arduous trip, but who were well repaid by the romantic ride through a long canyon, and the beautiful scenery everywhere. Great walls quite enclosed us at times, and often the formation was wrought by the elements into many fantastic shapes well worth journeying a long distance to see."

"While resting the mules we walked a mile to the Amargosa River of legendary name and fame, a stream which almost describes a circle in its course from start to finish until it finally empties into Death Valley a few hours ride further on. Its water is unpalatable because of nitrate and other minerals, and though bitter, as its Spanish name signifies, will save from perishing. A singular feature of the general streams in these parts, many of them turned upside down, is the volume of water at their sources and the scarcity at their terminal point; quite the reverse with eastern streams."

Subterranean Floods to Be Tapped.

Herein lies the explanation of the water holes and springs which break here and there, widely separated, into the desert soil. Actually, plots out the further flow of the rivers, like a vast sponge, and holds the water hidden beneath an arid, blasted face except here and there, where it returns to the light of day singularly cool at times. It is this fact that warrants Mr. Parsons's conviction that the day is coming when these subterranean floods can be tapped, raised and spread broadcast upon lands that would "blossom as the rose if water in plenty could be fed to them."

Indeed, we are informed of certain work done last year by the United States Geological Survey, which supports Mr. Parsons's theory. Exploratory drillings were undertaken in a desert valley near Ely, Nev., where the geologic conditions indicated the existence of ground water in sufficient quantity for practical irrigation. The results obtained were favorable. Three wells were drilled, two of which yielded large supplies within 100 feet of the surface. The third, however, although carried to a depth of 914 feet, did not produce enough water to be of potentially practical value for irrigation. Mr. Parsons describes the activities of a rancher, a near "desert rat," who, by trenching a seemingly dry erstwhile bed of the Colorado River, managed to get enough water to grow garden truck which he sold to mining camps in the neighborhood. That rancher in the western desert was virtually imitating the practices mastered by the Egyptians along the Nile thousands of years ago.