



The WATER BEARER

By J. ALLAN DUNN
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"RIMROCK TRAIL"

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CHAPTER VIII

Prospects

Caleb secured an amiable, steady-gaited saddle horse for his trip the next morning.

He carried his creel, an awkward thing to a rider of his lack of experience. In it he packed his lunch and a survey instrument or two with notebook and drawing materials. In his rod case, another cumbersome thing for him to carry, he included besides the joints of his pole a steel rod that he had secured at a blacksmith's in the upper valley, a tempered probe to be used for investigating depths of deposits. He had a geologist's hammer in one pocket, in another pipe and tobacco. His camera was tied to the saddle.

Lazily he rode down the valley, diverging sometimes and climbing a ridge, probing with his steel rod, taking photographs, making a contour sketch where the camera would not serve his purpose, marking closely the lip of strata, the character of rock formations, the general life of the country. Finally, close to noon, he rode down a wash, the sides of which were clothed in buckeye and oak, and lunched by the side of Boca creek, where the two sycamores made an archway for its waters.

He took the pendant from its packing and laid it in the palm of his hands. The artifact had done well. The tiny fishes, united by the ribbon, were delicately yet sharply cut.

Two fish united. A symbol of two living things that lived and moved in the same medium—water. Joined by a ribbon, Placens and Aquarius. A swift suggestion came to him that the symbol might indicate more than he had intended when he ordered the trinket. He flushed a little as he wondered whether the girl might devise some intimate intention in the design. Then he laughed at his own presumption. It was her sign, its connection with that on his own seal was fanciful, far-fetched.

He put the pendant back, got up, rolled his blanket, saddled and rode out into Caliente Sink, turning south along the creek, on through the canyon to the suspension bridge. There he dismounted and led his horse down the bank to the edge of the creek. He took off his roll and thrust the blanket and raincoat into the hollow of a tree that was masked with ferns, together with his creel and rod case. Unencumbered, he loped on to El Nido.

"This is my party call," he announced to Betty, who came to meet him, after Padilla, with a smile of greeting, had led away his mount for a grain feed and a promised rub-down and Maria had shown him into the patio.

The girl looked grave, seemed quiet, he fancied. But she brightened at the gift and accepted it without reserve.

"Is this really my sign?" she asked.

"One would think that I was a twin."

"It was very thoughtful and original of you to choose this. I shall like it best of all my gifts. Something made for me, something that belongs. If we are to credit the astrologers, do you know, we have an old volume that treats of such nonsense. Father will be pleased, too." Her own pleasure was so open and earnest that Caleb felt his satisfaction growing. He was glad she appreciated his taste.

They discussed the picnic and her friends, in friendly fashion. Thurston had returned to his Fresno vineyards. The Vedders, it seemed, had liked Caleb and wanted to see more of him. Carmen had reiterated her determination to insist upon a new beret from him. "If it was only a souvenir of the occasion," she had said. Betty appeared inclined to tease him a little about the impression he had made on Carmen.

"I am afraid I shall not see much of Miss Wilson," he said. "I expect to be very busy shortly."

She did not inquire specifically what he meant and he did not volunteer it. He did not mean to discuss his discovery with anyone until it was an accomplished fact—unless it became necessary in the order of business. Later he might have to branch the subject to Betty and her father.

At the end of an hour he rose to go and the girl ordered his horse saddled.

She gave him her hand, cool and slim but with the grip that told of efficiency, and he rode off. He left the direct trail to the canyon and mounted to a low rolling ridge that paralleled the stream. His eyes roved the valley, looking again for the landmarks he had noted on his first visit.

And then he saw from the height what his previous trails had hidden from him—the grove of cedars about a low white railing and, within the fence, some white headstones—the three-generation cemetery of the Clintons.

He frowned a little at the sight, re-

membering the girl's declaration. But he did not forego his present purpose. He was firm in his belief that public service was greater than private sentiment and he hoped that he could overcome the feelings of the father and daughter when the time came. If this obstacle had to be surmounted, it should be. He was strong in his conviction that he would overcome all hindrances to his great project, that already promised too much to be abandoned.

It was nearing twilight when he came to the gorge. He considered it best not to risk a fire. He did not wait his operations observed until he had come to a conclusion concerning them. He believed himself outside the bounds of the Clinton property, but he was not certain. If he was trespassing, he felt that Clinton and his daughter, in their present moods of resolution regarding any disposition of Hermanos valley, might resent what he was about, if they guessed his import, as a breach of hospitality.

He felt a little uneasy about his ethics. What he was about was for the public weal; it outweighed private considerations, he told himself, hammering home the argument. Hermanos valley was a private holding, yet, if public necessity demanded it for a dam site, public pressure, leading perhaps to legislative procedure, might insist upon condemnation proceedings.

But, if Clinton did not yield gracefully, the affair would create quite a stir, and Caleb would appear to Betty and her father in the light of a treacherous guest who had taken advantage



"I Am Not in Love With Her," Caleb Said Half Aloud.

of her hospitality to spy out the land. They would hold him responsible for ultimate condemnation and the desecration of the little gray yard.

The face of Betty Clinton, hurt, indignant, scornful, rose up before him. Perhaps he might be able to argue them to his standpoint, though he knew that idea was hardly tenable. He wanted her good will. Some instinct, entirely foreign to what he would have described as good Yankee common sense, whispered that his sentiment toward her was deeper-rooted than he imagined. That it might ripen into love. A love that might be reciprocated and that would be well worth while.

"I am not in love with her," Caleb said, half aloud. And, as he said it, he knew that the girl could not be dropped out of his life without leaving a wound that would ache long after it had become a scar. He was in the grip of complex emotions. Brain pointed out the importance of the project, born of his own talents, made

possible by his talents. And the sex instinct, the desire of one woman, wrestled with the offspring of his intellect. Brain and heart were at odds.

But two things had come plainly out of the muddle. He wanted to carry out the work. That was a thing that should be done—if he did not someone else would, sooner or later, make the same discovery. And he wanted Betty Clinton. It was not that he merely did not want to lose her respect and friendship—he wanted her. The desire of her continually inhibited concentration on his project.

He woke before dawn, moved his horse to a better patch for browsing, took his probe and geologist's hammer and started to work, resolutely dismissing any aftermath of the night's problem. He had not brought wading boots with him and he took off shoes and socks and puttees, turned up the laced ends of his riding breeches and waded out into the gut where the pent-up waters of Hermanos, when the valley was a lake, had broken through.

The sun was two hours high before he came out of the creek, his pockets filled with rock samples, wet, tired, his purpose accomplished. He had still to refer to certain geological reports, to analyze his samples, but he was sure of the result.

His jaw was set and his face grave from concentration, but it shone with a certain satisfaction.

"That problem is solved," he said aloud as he mounted his horse at last and rode the willing steed down canyon toward the breakfast that both craved. He did not notice the man who came out on the suspension bridge and watched him until the foliage shut him from view.

It was Padilla. The Mexican's face was puzzled, suspicious. He could not understand why el señor should have stayed the night at the head of the canyon. He descended to the creek bed, readily finding evidence of what Caleb had been doing, evidence that a day or so would have erased. He saw where Caleb had gone down into the stream and his quick eyes noted where the rocks had been chipped. A convulsion came over his face with the sudden conviction that the guest had been up to no good.

"The dam! Gringo, Yankee spy!" he muttered. But his thoughts were twisted. He remembered Caleb's gallant action with the bull. He could not justify the two affairs. And he could not comprehend what Caleb had been up to. Unless it was mining. And there was no gold on Gabilan, no silver or cinnabar. Save that, whatever he had done, he had accomplished secretly, deliberately giving out the impression that he had gone down the canyon the night before. He decided to talk the matter over with Maria.

For four days Caleb worked day and night, almost unceasingly. Every night he practiced his qualities as Water Diviner. He cut his own hazel twigs and, as soon as the moon was up, he went out on the desolate surface of the Sink, with results that justified his first impressions. There was water everywhere. It backed up to the southern border and the presence of the water proved that clay lay under it. This he verified by finding clay on the side hills with his boring probe. His cistern had walls as well as bottom, a lining that was impervious. It was a giant clay saucer holding water for the population of a whole city.

At the end of the time he was worn lean and tired in body. Sleep had been snatched in catnaps through the day, before the moon came up and in the early hours of dawn. He returned to the hotel, gave up his horse and slept luxuriously for thirty hours. But, before he went to bed, he dispatched a telegram. It was to his lawyer in the East, to whom he had given certain powers-of-attorney concerning the possible sale of his house. In the message he urged an instant sale, even at some slight sacrifice, and asked for the wired remittance of the price through his Golden bank.

Quick with enthusiasm, he went back to Golden, fully rested, to complete plans for submission to Cox. The latter, he found, was out of town and not expected for two weeks. This suited Caleb, who had much to do. He hired a small office and equipped it with drafting table, desk, a small filing cabinet and two stools.

He had to set his plans on paper, to make drawings, put together rough estimates, and he resolved to make a working model of the whole project. He did not anticipate being able to do more than suggest the magnitude of the affair and its cost. What he mainly hoped for was to prove its practicability, and the model would go far toward that.

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Who was the "inventor" of radio? The Soviet government claims the honor for a Russian, Prof. Alexander Stepanovitch Popoff, and has adopted a characteristic method of telling the world about it.

A new Russian stamp came to the notice of the writer a short time ago. Above an excellent likeness appear the words "Inventor of Radio-Popov." The language of this inscription is Esperanto, though the other characters on the stamp are Russian.

The facts appear to be that Professor Popoff—admittedly one of the great pioneers of wireless—publicly transmitted wireless signals over a distance of 40 meters in 1895, the year before Marconi took out his first patent for Herizian wave telegraphy.

But Branly and Sir Oliver Lodge had been experimenting for some time along the same lines, and the latter gave demonstrations in 1894 in which "coherers" (the earliest form of radio "detectors") were employed. It is not easy, therefore, to award the palm. Hertz, after all, was the first to produce the radio wave.

Parasitic Ivy

"At the moment when there is so much talk and action in the direction of afforestation," writes a correspondent of the London Times, "may I call attention to the awful destruction of many hundreds of thousands of trees, caused by that terrible scourge, the parasitic, pernicious weed, ivy? As I drive through the country, I regret to say that it is the exception to see a tree which is not having its life's vigor sucked from it and its ultimate asphyxiation and strangulation brought about by this scourge."

Russian Given Credit for Radio "Invention"

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What's the Answer?

Here is a new feature that will provide profitable entertainment for all of our readers. In each issue we will print a series of twenty questions covering such subjects as history, science, geography, literature, arithmetic, religion, sports, economics, famous sayings, natural history and other things. In this issue we start the series with the first twenty questions. Our next issue will carry the answer to these questions and another set of twenty, and so on over a period of several months. Try to answer these questions as they appear in each issue. To do so, to search for the answers that you do not know, will add materially to your store of valuable information. This new, "What's the Answer" department is an educational feature of unusual value. Cut out the questions, keep them until the answers appear in the next issue and then see how near correct your own answers have been. Follow it from issue to issue and you will find it fascinating.

Questions—No. 1

- 1—Who discovered the Pacific ocean?
- 2—What is the oldest town in the United States and when was it settled?
- 3—What is the area of the earth's surface?
- 4—What is the average person's range of visibility?
- 5—How many times has St. Louis won the National league pennant?
- 6—What is the meaning of the Renaissance as applied to art?
- 7—What land is remarkable in that it has practically no drainage to the sea?
- 8—What is the oldest Greek letter of college fraternity?
- 9—Who said, "I regret that I have but one life to give to my country"?
- 10—What industry is considered the barometer for general trade in the United States?
- 11—What is myopia?
- 12—How old is the earth?
- 13—When was negro slavery introduced into the United States?
- 14—When was Yale college founded?
- 15—Who was the first man to drive an automobile more than a mile in a minute?
- 16—What American actor has won distinction as tragedian and comedian; as an interpreter of Shakespeare and of the modern drama, and is equally proficient on the stage and in moving pictures?
- 17—Which of the continents has the most regular coast line?
- 18—Who was the first lyric poet of France?
- 19—Who said: "D—n the torpedoes! Go ahead!"?
- 20—What is America's greatest undeveloped resource?

Accidents That Have Made Big Industries

A piece of cheese tossed by one workman at another during the luncheon hour missed its mark and dropped into the plating bath used in the production of copper disks from which wax phonograph records were stamped. Later the disks from that bath were found to be far superior to the others, and an investigation revealed that the casein in the cheese had done the trick. This disclosed a possible improvement worth thousands of dollars to the manufacturer. Telephone engineers discovered that an alloy of nickel and iron, when produced in the form of a narrow ribbon and wound around the copper core of a submarine cable, would increase the speed of the cable six times. The only trouble was that no one seemed able to find a flux that would weld the ends of the ribbon into a solid piece. One day a workman jokingly said: "Let's try salt." Picking up the shaker from his luncheon pail, he started to sprinkle the salt over the flux, when the cover fell off the shaker and the salt poured over the weld. This started a chemical action that united the edges, and the problem was solved. A scientist in France, while experimenting in his laboratory, inadvertently opened the wrong valve. Before he could rectify his mistake several drops of moisture settled in a glass tube that was part of the apparatus. His elation knew no bounds, for here at last was the end of the long search for liquid oxygen. Again an accident created an industry and gave us an explosive far safer and mightier than dynamite.—Floyd W. Parsons in the Saturday Evening Post.

Prophecy Fulfilled

There are several lakes or streams in different parts of the world with which are connected strange stories. One is Lake Chrissie, four miles from Ermelo, in the eastern Transvaal, when the Dutch emigrants from the Cape first settled in the Transvaal an old Kaffer medicine man predicted that some day the lake would become dry, and then the Boers would lose their independence. This prophecy was fulfilled when the Boers were subjugated by the British.

DAIRY THE DAIRY FARM POULTRY

SILAGE IS MOST ECONOMICAL FEED

Every dairy farmer worthy of the name should have a silo, because dairying is rarely, if ever, profitable in these days without one. However, whenever a farmer contemplates the purchase of a silo, first of all he considers the advantages that are likely to accrue from its use, also any disadvantages. Certainly the only disadvantage is the first cost of the silo, which is not so great either, considering the length of service a good substantial silo will give.

Farmers on every hand are beginning to realize the many good sound reasons for feeding silage. In all my experience, I have not talked to a single farmer who was displeased with his silo, with one exception, and in that instance it was a home-made affair and not large enough, writes H. W. Swope in the Indiana Farmer's Guide. That farmer today has two silos on his farm, is a successful feeder, farmer, and a good business man as well.

Silage is the most economical feed that can be produced for dairy cattle, and corn is without question the best crop to grow for silage. It is the writer's experience that where a farmer has eight to ten cows and sufficient tillable ground to grow corn, a silo without question be a source of profit to that farmer, regardless of his location. In order to make dairying successful it is necessary to have a silo to furnish feed all the year round. Silage also makes any farm more productive where it is used. One of the reasons I have found a silo to be profitable, aside from the feeding value of silage, is that more silo material can be grown on a given acreage and put into the silo cheaper than it could if it were harvested and fed dry. No other feed can compare with silage in succulence and palatability. The dairy cow that is fed silage will keep up her flow of milk and be more profitable than from any other method of feeding.

Corn Has Surely Proven Most Economical Grain

The results of experiments of the different experiment stations in feeding cattle on pasture indicate that the pasture should be supplemented with grain in maintaining the appetite and in securing satisfactory gains during the last stages of the feeding period. These experiments have shown that it is profitable to feed grain during the first part of the feeding period when cattle are on pasture.

Corn has proven the most economical grain to feed as a supplement while cattle are on good pasture. Since pasture grass is very high in protein, it has not proven so profitable to feed high protein concentrates such as linseed meal or cottonseed meal, although cattle that received linseed meal had a better finish than those that did not receive it in the ration. This is not always true if cottonseed meal is fed instead of linseed meal.

Producers Responsible for Dairy Cleanliness

Inasmuch as the producers of the milk and cream are responsible for the quality of the finished product in a large measure, they are the ones who must be appealed to and made to see the importance of cleanliness in everything connected with the production and handling of milk. Clean barns, clean cows, clean milk utensils, clean milkers, all are very important. Despite the most careful methods in the matter of cleanliness, some bacteria will get into the milk, hence the milk should be cooled and kept cool as soon as possible to check the growth of the bacteria which have gained entrance into the milk or cream. In this connection it is well to remember that bacteria double in number in every half-hour when the milk is kept at a favorable temperature, which is from 70 to 80 degrees Fahrenheit.

Dairy Notes

Dry pastures make mighty little milk. Supplement them with some green corn or sorghum.

Fix a box where the young calves can have some grain and hay. It is surprising how quickly they can eat it.

When feed is not plentiful, as is the case in some localities this year, the boarder cow, masquerading as a milk cow, is an even greater liability than usual.

Give the new-born calf a quart of milk three times daily at the start.

The use of silage in feeding dairy cows through the summer is increasing and will continue to do so as its value in dry pasture seasons is better appreciated.

In raising the dairy calf leave the calf with the cow for one or two days and then take it away and feed from sight to ten pounds of warm milk per day for about two weeks.

WATCH MARKETING EGGS AND POULTRY

"Poultry production is running wild without chart or compass, stimulated by past profits, by a tendency to shift from other nonpayment branches of agriculture to poultry raising, and by optimistic statements of those who sell supplies to poultrymen."

This is a statement of Prof. James E. Rice, head of the poultry department of the New York State College of Agriculture at Ithaca, N. Y., commenting on trends in the poultry industry.

Recent figures showing the enrollment in the correspondence courses in poultry husbandry offered by the college, bear out this statement.

Nearly five hundred New York state farmers are studying the four poultry courses, and an analysis of this figure shows that approximately fifty are studying the general management of a laying flock to one who is taking the course in marketing of eggs and poultry.

"This may indicate," say college authorities, "that the poultrymen are a great deal more interested in producing eggs and poultry than they are in marketing them so they can compete with the high-quality products shipped to eastern markets by midwest and far west producers."

"Better marketing and curtailed production," according to Professor Rice, "are necessary to save the New York state poultry industry from a serious depression."

Dirty Eggs Expensive to Careless Poultryman

Dirty eggs, especially numerous this time of year, cost farmers and poultrymen from one to three cents per dozen because of the lower grade in which they are placed, according to E. R. Menefee of Purdue university, who is investigating marketing of poultry and eggs.

Three principal causes may be assigned for the large volume of dirty eggs, Menefee found. They were: too few nests, resulting in the hens hiding their nests in dirty, wet places; unclean nests, and allowing hens free range in wet weather.

Dirty eggs can be eliminated by providing a sufficient number of clean, roomy nests, at least one to every four or five hens. These nests should be placed in a darkened part of the house to prevent egg eating and floor eggs. Do not permit hens to roost in the nests at night and change straw or shavings at frequent intervals. The wet range is the most common cause of dirty eggs. Keeping hens confined to the house in wet weather until noon, and gathering of eggs before they are let out will keep eggs clean.

Ducks Not Particular Where They Leave Eggs

Ducks lay heavily during the laying season. However, they are not particular as to where they leave the eggs. It is no uncommon sight to see duck eggs scattered here and there in the yard or hog lot. As a result of this thoughtless attitude on their part, many eggs are eaten or destroyed by dogs, swine or the ducks themselves.

Poultry Items

- Tobacco in some form is now generally used as a remedy for intestinal worms in poultry.
- Remove all males four to five weeks of age. Furnish perching space early to prevent crowding.
- You can't have thrifty chicks unless they get sunlight—either direct, or through these glass substitutes. Window glass strains out the life-giving violet rays.
- The demand for fresh duck eggs is never oversupplied.
- "The best hens and roosters to keep and to breed from," says one poultryman, "are the bright, nervous, 'talkative' kind, but not the 'squawkers.'" These are signs of vigor, and vigor means eggs.
- It is the general practice not to keep breeding ducks more than three or four years, although people have kept them with good results until they were eight years old.
- Heavy egg production, like heavy milk production, can only be secured by liberal feeding of a well-balanced ration.
- Only three chicks should be placed in a brooder house for every square foot of its floor space. A house 10 by 10 feet will hold only 300 chicks.
- Scratch feed, mashes, meat scraps, and milk, properly fed, under common-sense methods make it possible to bring poultry into egg production successfully.