OBSERVATIONS UPON THE USE OF THE DIVINING ROD IN GERMANY

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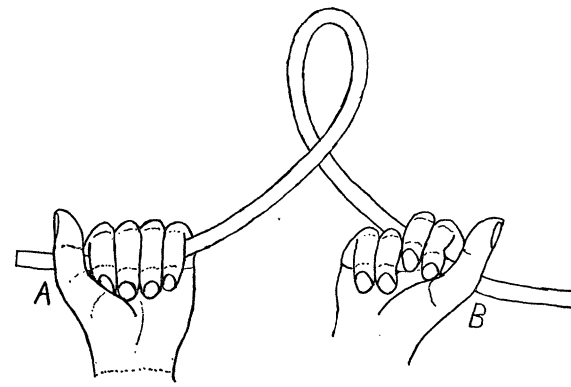
THE use of the divining rod, as a means for discovering subterranean supplies of water and metals, is usually dismissed with alchemy, astrology, table tipping and other occult sciences as a subject unworthy of serious consideration. The numerous books and articles upon rod operating which appear from year to year indicate, however, that the subject is one of constant and ever-increasing interest. During a recent extensive agricultural tour in various countries of Europe I was surprised to learn of the frequency with which the divining rod is employed to locate sources of water for estates, industries, towns, railroads, hospitals and other institutions. The recent statement of Professor J. W. Gregory that this repudiated instrument "is perhaps more used now than at any previous time" is in my opinion no exaggeration.

While visiting a large sugar beet estate near Magdeburg, Germany, last June, I was informed that its water supply had been located by a celebrated professional *Rutengänger* (rod walker), or dowser, and on July 6 I availed myself of an opportunity to observe this operator's method of working. He has acquired great notoriety in Germany for his success in finding subterranean water supplies, a publicity that has been enhanced by his numerous articles upon the subject. His published lists of references include several thousand names of estate-owners, factory officials, managers, contractors, etc., who all speak highly of his success in locating water supplies for their special needs. As this operator's method of using the rod and his views upon the subject differ so considerably from the accounts given in the literature upon water-divining the following account may be of interest.

A demonstration was given before a small private audience in a vacant lot in the suburbs of Magdeburg. The operator carried with him several loop-shaped rods of about the little finger's thickness (see cut) of steel, aluminum and other metals, the choice of the rod depending upon the nature of the test. Before beginning operations he fastened to his chest a padded leather jacket to protect himself against the blows of the implement. Selecting first a steel rod and grasping it with one end in each hand, palms upward (the left as at A and the right as at B), elbows against sides and the loop extended horizontally before him, he began to pace across the lot when sud-



denly the loop of the rod shot upward and struck the leather chest-protector a strong blow. The spot where this occurred, according to the operator, marked the edge of a subterranean stream. By continuing the survey in other directions the boundaries of this reputed stream were located. From the demarcations of the reactive zone obtained by another rod of aluminum (stated to be of greater sensibility) the depth of this stream was estimated and by observing the reaction with another rod the operator pronounced the water to be sweet; he also indicated the direction of the underground stream. He stated that with certain metallic ores the rod struck downwards while in the case of petroleum a vibratory movement of the rod took place. The operator made the curious statement that spots which lie above the intersection of subterranean water veins are particularly reactive and hence exposed to the danger of being struck by lightning. He stated that one end of the rod was positive and the other negative and that he could form conclusions as to the nature of underground deposits of coal, potash, petroleum, metallic ores, natural gas and other substances by comparing the reactions of his different rods first with the positive pole in the right and the negative in the left hand and then with these positions reversed. The technique of dowsing would thus seem to be more highly elaborated in Germany than in other countries.

When I attempted to use the rod myself no reaction was obtained. But when I grasped one end tightly with both hands side by side and the operator held the other end between the first two fingers and thumb of his right hand (as at B), and extended his left hand to within a few inches of my shoulder, the rod twisted strongly upward, as we came to the reactive

zone, notwithstanding all my efforts to prevent this by tightening the grasp of my hands. The same effect occurred when a third person, touching my arm, stood between me and the operator, who explained that had he actually touched us during this experiment the rod would have given me a serious blow because of the greater intensity of the reaction. The experiment of interposing another person in the circuit of rod and operator is frequently performed by dowsers and is held by many to prove that the motion of the rod is due to an external force. Barrett and Besterman in their book upon "The Divining Rod" (1926) describe many such experiments and come to the conclusion that it is a muscular action of the dowser that moves the rod. While it would seem impossible for a person to move the rod with only two fingers and a thumb in opposition to the efforts of two hands, I nevertheless believe that with the rod held as in position B, the muscular fingers of an experienced operator can secure a sufficiently strong grip upon the polished metal to move it against the combined resistance of two hands held side by side as at A. The rod in this case would function simply as a crank with the two hands at A serving as the bearings. It was noticed that the operator always held his right hand nearer to the loop of the rod and this would be the better position for producing a crank motion. The operator declared that there was no trick in the matter and that the rod moved without conscious effort upon his part.

When asked for an explanation of the force that moved the rod the operator replied that he could only offer a conjecture. It was his opinion that emanations of different highly penetrative rays were constantly escaping from the interior of the earth through the outer crust into space. These rays he thought to be absorbed in whole or in part by deposits of water, potash, coal, petroleum, minerals and other substances, with the production of surface areas more or less devoid of certain emanations. He compared these rayless zones with the shadows cast by the globe of a lamp upon the ceiling and supposed them to affect the sympathetic nervous system of his body in such a way that unconscious muscular contractions produced the movement of the rod. When asked if these so-called rayless areas could not be detected by physical methods he replied that Dr. Ambronn and others had devised electrical apparatus for locating hidden supplies of water and minerals, but nothing had yet been found so delicate as the human body. He claimed to have demonstrated the projection of these reactive rayless zones into space by making experiments with his rods in an airplane!

The operator stated that "rod-walking" was very exhausting, that his pulse rate went up to 140 beats per minute and that three hours per day was as long as he could operate without danger of collapse. He was of the opinion that his dowsing ability was the result of a tropical fever which left him with a supersensitive nervous system. His palms and fingers were calloused from frequent use of the rod. An inflamed appearance of the skin of his palms he attributed to burns produced by radiations at the positive and negative poles of the rod. Many of his statements were, in fact, a confused jargon about alpha and beta rays and other terms picked up from his loose reading of scientific books.

But apart from the absurdities and inconsistencies of his explanations, which after all were only conjectures, and disregarding the sensational claptrap of many features of his demonstration this operator has to his credit an unusually long list of undisputed successes. A prominent well-driller in Magdeburg informed me that he was correct in his predictions in over 90 per cent. of the cases, his failures being usually errors in estimating either the amount or the depth of the hidden water supply.

The opinion of several German scientists, whom I questioned regarding the reliability of dowsing as a method of locating water, was that after excluding the inevitable humbuggery and deception which attend so many performances of this kind there still remains the large residuum of successes, achieved by certain rod-operators, that could not be attributed to mere chance or luck. They thought it possible that these men might, perhaps, have inherited some primitive racial sense, not shared by other men, like the homing instinct of pigeons or migratory birds; or else that they might be gifted with an exceedingly acute unconscious power, sharpened by a wide prospecting experience, of rapidly correlating certain peculiarities of topography with the occurrence of subterranean water pockets. The former view is essentially the cryptesthetic theory of dowsing proposed by Barrett and Besterman in their book upon "The Divining Rod"; the other view of sharp observational ability is the one suggested by Gregory in his paper before the British Waterworks Association in 1927 upon "Water Divining"[1] in which he subjects the cases of Mullins, Stone and other operators, described by Barrett and Besterman, to a critical review. Whichever of these explanations be adopted, the rod itself is ruled out of consideration as a primary cause of the phenomenon. In fact several noted water-finders, as the celebrated Abbé Paramelle of France,

[1] Reprinted in Annual Report of the Smithsonian Institution, 1928, p. 325.

and Gataker in England, have made no use of a rod at all. This implement would therefore appear to serve only as a helpful index for expressing certain states of the dowser's subconsciousness. What impressed me as peculiar in the Magdeburg demonstration was that the operator employed a heavy metallic rod instead of the traditional and more easily manipulated fork-shaped branch of a tree.

The explanation of an external physical force, as suggested by the German rod-walker, has nevertheless a large number of advocates, the best known of whom is, perhaps, Henri Mager, of France, whose views have been rejected by Barrett and Besterman and also by Gregory. This opinion has recently been revived again in a lecture before the Czecho-Slovakian Academy of Agriculture by R. Janota[2] who compares the body of the dowser to a wireless receiving set, the hands acting as the two electric poles, the legs as the earth line and the rod as the antenna. This lecturer states that just as some wireless receivers have certain defects so the human nervous systems of different individuals are not equally sensitive.

The Czecho-Slovakian Academy of Agriculture appointed a committee to investigate the phenomenon. Similar committees have been appointed in fact in many European countries but with unsatisfactory results. As Gregory has pointed out, "Testing the divining rod is difficult and promises no answer that will be universally accepted." Following the negative results reported in one test come the favorable results reported in another, as for example in the recent experiments at Johannesburg, where the celebrated English operator Stone, who used a clock spring for a rod, was reported to have been successful in finding hidden bags of gold.

With the growing population of Europe there has been a constantly increasing need of new supplies of water for agricultural, industrial and municipal purposes and this want is reflected in the increasing number of dowsers, *sourciers* and *Rutengänger* who are ready to supply the demand for their services. Even those who scoff at the rod as a relic of superstition do not hesitate to employ it should the occasion arise. In this respect they are following the attitude of Sir Herbert Maxwell, who once remarked, "I don't believe in the divining rod, but I don't deny that its virtues are genuine; and were I in straits to find water, I should employ without hesitation a professional water finder—rod and all—if there remains one so successful as Mullins was."[3]

OBITUARY

JUR. PHILIPTSCHENKO

JUR. PHILIPTSCHENKO, professor of genetics, died of meningitis on May 19, 1930, at Leningrad. He was born on February 1, 1882, in the family of an agriculturist-scientist residing in the province of Orel. After graduating at the University of Petersburg, in 1906, he continued studying for his professorship at the Zoological Cabinet of the university. In 1912 he presented his dissertation on the embryology of Apterygota, and the degree of master of zoology was conferred on him for it. In 1917 Jur. Philiptschenko obtained his doctorate on presenting another dissertation on the variability and heredity of the skull in mammals. In the meanwhile, he was elected first assistant professor, then reader in zoology, and in 1919 professor of the University of Petersburg, where he established the first chair of genetics in Russia and founded a new school of young geneticists. Besides his work at the university he gave lectures at several other superior schools. Since 1920 Professor Philiptschenko was in charge of the laboratory of genetics and experimental zoology in the Institute for Research in Natural Sciences at Peterhof. In 1921 he became chief of the bureau of eugenics and genetics at the Academy of Sciences. Some months before his demise Professor Jur. Philiptschenko was placed at the head of the department of genetics of the Institute of Animal Industry of the Lenin Academy of Agricultural Sciences in U. S. S. R.

His works, nine of which represent large manuals of genetics and experimental zoology, amount to 114 in number.

The publications of the earlier period of Professor Philiptschenko's scientific work (1905–1913) supply valuable data pertaining to the domain of anatomy and embryology of Apterygota; those of the later part (1914–1930) furnish important facts relating to genetics of animals and plants.

Professor Philiptschenko devoted the last seven years of his life to the study of the variability and heredity of quantitative characters in soft wheats, as well as of the process of development of the ear in wheat. Five of his works on these subjects were published in Germany, and a monograph by him on the genetics of soft wheats is being issued.

Professor Philiptschenko was a member of several Russian and foreign scientific societies as: Deutsche Gesellschaft für Vererbungswissenschaft, the Amer-

[2] Bulletin of the Czecho-Slovakian Academy of Agriculture, Vol. VI, No. 2, pp. 190–197, with report of discussion, *ibid.*, pp. 198–202. See also abstract, *Internat. Review of Agriculture*, Monthly Bulletin of Agricultural Science, May, 1930, p. 162.

[3] "Memoirs of the Months," I, 103–106: (1897).