THE STORY OF RADIUM IN AMERICA

BY THOMAS C. JEFFERIES

Truly a scientific research, and especially as one of the co-discoverers of the most wonderful mineral in the world. This woman was Mme. Curie, who now visits the United States, and the mineral, for which the first time was isolated by her and her French husband, Professor Curie, was radium. Hence the appropriateness of the move, that is easily more definite, in the year 1867, a woman who was the first to raise one hundred and thousand dollars and in Paris to pursue advanced work in science. While there she met with scientific knowledge and experience. Professor Henri Becquerel, with whom she became associated. Because of his accident. With this in mind, we may regard the almost inaccessible deposits of radium ore, their distance from such necessities as fuel, food and water, and the difficulty and enormous expense of reducing the ore to its precious content, as Nature’s compensatory method of price fixing.

Radium carries only a small fraction of a grain of radium in the ton, none of it will ever be found in large masses because it is formed by the decay of uranium, a process that is not completed until it is in its natural state radium itself decays and changes to other elements so rapidly that it does not accumulate in visible masses. Radiometrically, or in other words, the characteristic manner in which radium manifests its presence, was accidentally discovered by Professor Becquerel while examining radium in a tube in his waistcoat pocket. The burning of his body about the chest led to his discovery of the therapeutic value of the substance. Even after Mme. Curie’s discovery of radium it was still regarded as a scientific curiosity until Professor Becquerel’s assiduous. With this evidence that radium would destroy tissue its later employment in fighting malignant disease was but a question of time and experimentation.

Radium also gave off minute explosions at the rate of three hundred and sixty thousand per second. These explosions form the gas known as radon. This is a gaseous emanation which is the therapeutic agent. There is no remedial action in the powder itself. The presence of radium is manifested by the faint blue fluorescence of the sheets of tinfoil or paper that form a part of a testing apparatus.

Radium minerals are generally found in granite formation. Most of the original radium minerals, such as uranitite, samarskite and brannerite are black, and are seldom found in quantities of much commercial value. Pitchblende is of practically the same composition as uranitite and of the same general appearance, excepting that it shows no crystal form and occurs in size of a five-dollar gold piece is worth $900,000! Considering, however, the hardness and the private in that both man and beast are obliged to undergo in order to obtain this precious mineral, and the long, complicated and expensive process by which it must be treated before its valuable residues can be secured for the use of humanity, the present writer, who has spent some years in the mining field and who later, in the laboratory and the clinic, has seen many cases of malignant growth retarded or cured completely, has become convinced that the vast monetary value of this mineral has not been overrated. Someone has told us that heaven knows how to place a proper price upon its wares. With this in mind, we may regard the almost inaccessible deposits of radium ore, their distance from such necessities as fuel, food and water, and the difficulty and enormous expense of reducing the ore to its precious content, as Nature’s compensatory method of price fixing.

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