

James B. Macelwane, Seismologist and Teacher

James Bernard Macelwane was born in Port Clinton, Ohio, in 1883. In 1903 he joined the Jesuit Order, and until 1918, when he was ordained, he was engaged in the arduous training of his order, in the classics, science, and theology. From 1912 he was instructed in physics at St. Louis University. About 1920 he proceeded to the University of California, where he studied under the late Elmer E. Hall, attaining the degree of doctor of philosophy in 1923.

While he was in St. Louis, Father Macelwane became interested in the seismographic station there and wrote his first scientific paper on the "Physics of the seismograph." There followed a number of papers. One was on the "Jordan sunshine recorder," showing his interest in meteorology. In 1918 appeared "The geology of St. Louis."

Father Macelwane's interests were broad. His doctor's thesis was a study of the surface waves of a California earthquake and their change in character as they progressed around the earth. This required the borrowing of seismograms from around the world. In this project he sought the aid of the late Andrew C.

Lawson, chairman of the geology department at the University of California. The university had maintained two seismographic stations since 1887, but the charge of them had been in the hands of astronomers, engineers, and geologists throughout the years. Lawson decided that it was time to put a trained seismologist in charge and persuaded the Jesuit Order to allow Macelwane to remain 2 years after he obtained his Ph.D. degree to reorganize the seismographic stations and train a man to take his place when he returned to St. Louis. I was that man. Father Macelwane, with his indomitable energy and persistence, aroused an interest in expanding and improving the stations, which resulted some years after his return to St. Louis in the establishment of two new stations and new equipment for the old.

On his return to St. Louis, Father Macelwane took charge of seismological work there. He added a second station (Florisant) and entered on a program of developing new seismographs. One of his students, the late William Sprengnether, began to manufacture the new instruments. Macelwane revived the Jesuit

Seismological Association (formerly called the Jesuit Seismological Service) and was its president throughout the remainder of his life. He organized geophysical curriculums in St. Louis and was dean of the Institute of Technology. Some 25 Ph.D. theses on geophysical subjects were written by Macelwane's students at St. Louis.

But organization of activities within his order and his university was only one part of Father Macelwane's activities. He played a large part in national geophysical activity. He was chairman of the committee of the National Research Council that produced bulletin 90, *Seismology*. He was also a contributor to the *Interior of the Earth*, the first edition of which was a National Research Council publication. He was a panel chairman with the Research and Development Board. He was active in advising the Navy about the use of microseisms in tracking hurricanes. The tripartite method was Macelwane's own. At the time of his death he was a member of the National Science Board and chairman of the technical panel on seismology and gravity of the U.S. National Committee for the International Geophysical Year.

Father Macelwane served as president and was a member of the board of editors of the Seismological Society of America. At the time of his death he was president of the American Geophysical Union. He was a member of the National Academy of Sciences and of a dozen other societies and academies.

He died in St. Louis on 15 February 1956. His was a rich and active life.

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He is still at play, save only that his play is such as manhood stops to watch, and his playthings are those which the gods gave their children. The universe is his box of toys. He dabbles his fingers in the day-fall. He is gold-dusty with trembling amidst the stars. He makes bright mischief with the moon. The meteors nuzzle their noses in his hand. He teases into growling the kennelled thunder, and laughs at the shaking of its fiery chain. He dances in and out of the gates of heaven; its floor is littered with his broken fancies. He runs wild over the fields of ether. He chases the rolling world. He gets between the feet of the horses of the sun. He stands in the lap of patient Nature, and twines her loosened tresses after a hundred wilful fashions, to see how she will look nicest in his song.—FRANCIS THOMPSON, describing Shelley. Quoted by A. S. EVE as applicable to Lord Rutherford.