

Jane Marion Oppenheimer (1911-1966) ^[1]

By: Buettner, Kimberly A. Keywords: Biography ^[2] Evolution ^[3] History ^[4]

[Jane Marion Oppenheimer](#) ^[5], embryologist and historian of science and medicine, was born on 19 September 1911 in Philadelphia, Pennsylvania, to Sylvia Stern and James H. Oppenheimer. After studying zoology at [Bryn Mawr College](#) ^[6], Oppenheimer received her AB degree in 1932. Oppenheimer received her PhD in [embryology](#) ^[7] at [Yale University](#) ^[8] in 1935 and worked as a research fellow from 1935-1936. While at Yale she was influenced by the work of [Ross Granville Harrison](#) ^[9] and [John Spangler Nicholas](#) ^[10], the latter of whom was Oppenheimer's PhD advisor. While working with Nicholas, she studied the [embryology](#) ^[7] of killifish (*Fundulus heteroclitus*) using Nicholas's method for dechorionating the embryo, which made it possible to perform precise experimental manipulations on teleost embryos. Oppenheimer became interested in teleosts after studying the history of biology as a graduate student and published a part of her dissertation, "Historical Introduction to the Study of Teleostean Development," in the [History of Science Society](#) ^[11] journal *Osiris*. From 1934-1937 she published numerous noteworthy papers discussing *Fundulus* [embryology](#) ^[7]. Oppenheimer performed [fate mapping](#) ^[12] experiments and developed a staging series for *Fundulus* embryos. When the United States and the USSR developed Apollo-Soyuz as a joint space venture, Oppenheimer used *Fundulus* embryos to design an experiment that tested the effects of a zero-gravity environment on embryonic development.

In 1937 Oppenheimer joined the department of biology at [Rochester University](#) ^[13] as a Research Fellow in [embryology](#) ^[7]. In 1938 she left for Bryn Mawr where she remained until retiring as Professor Emerita in 1980. At Bryn Mawr, Oppenheimer pursued a number of research endeavors in [embryology](#) ^[7] and the history of biology and medicine. During a Guggenheim fellowship she became interested in John Hunter's work and published a study of his and his brother William Hunter's experiments. While continuing her embryological research, Oppenheimer published articles on [Ernst Haeckel](#) ^[14], [Hans Spemann](#) ^[15], [Hans Driesch](#) ^[16], and others, which were later compiled in a book, [Essays in the History of Embryology and Biology](#) ^[17] (1967). As her historical interests grew Oppenheimer began to teach history of science at Bryn Mawr in addition to her biology courses. After her retirement in 1980 she returned as Visiting Professor from 1983-1984.

Before her death on 19 March 1966 Oppenheimer achieved distinction as both an embryologist and a historian. She had a special interest in the relationship between embryological data and evolutionary theory. From 1957-1959 she served as treasurer for the [American Society of Zoologists](#) ^[18] and later served as president in 1974. She was also active in the Society for [Developmental Biology](#) ^[19]. Throughout her career, she received a number of awards and honors including presentation of the [History of Science Society](#) ^[11] Sarton Memorial Lecture in 1977, membership in the [American Philosophical Society](#) ^[20] where she was secretary from 1987-1992, and membership in the [American Academy of Arts and Sciences](#) ^[21].

Sources

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Jane Marion Oppenheimer, embryologist and historian of science and medicine, was born on 19 September 1911 in Philadelphia, Pennsylvania, to Sylvia Stern and James H. Oppenheimer. After studying zoology at Bryn Mawr College, Oppenheimer received her AB degree in 1932. Oppenheimer received her PhD in embryology at Yale University in 1935 and worked as a research fellow from 1935-1936. While at Yale she was influenced by the work of Ross Granville Harrison and John Spangler Nicholas, the latter of whom was Oppenheimer's PhD advisor. While working with Nicholas, she studied the embryology of killifish (*Fundulus heteroclitus*) using Nicholas's method for dechorionating the embryo, which made it possible to perform precise experimental manipulations on teleost embryos. Oppenheimer became interested in teleosts after studying the history of biology as a graduate student and published a part of her dissertation, "Historical Introduction to the Study of Teleostean Development," in the *History of Science Society* journal *Osiris*. From 1934-1937 she published numerous noteworthy papers discussing *Fundulus* embryology. Oppenheimer performed fate mapping experiments and developed a staging series for *Fundulus* embryos. When the United States and the USSR developed Apollo-Soyuz as a joint space venture, Oppenheimer used *Fundulus* embryos to design an experiment that tested the effects of a zero-gravity environment on embryonic development.

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