

# National Academy of Sciences - Biographical Memoirs

<http://www.nasonline.org/publications/biographical-memoirs/online-collection.html>

By Michael P. Filosa

Flack Norris (1871-1940) for the November *Nucleus*, I came across his biographical memoir on the website of the National Academy of Sciences (NAS). This memoir was written by John D. Roberts and was presented to the Academy in 1974, a scant(!) 34 years after his death.

The NAS was founded in 1863 by 50 of the most prominent scientists in the United States, and its initial charter was signed by Abraham Lincoln. It is a tradition that each of its members be memorialized in a memoir to the Academy written by a peer (or two).

These memoirs are a treasure trove of the history of science. The sole weakness is that they are posthumous and not necessarily, very timely. However, they are quite thorough and a good overview of the scientists, complete with a detailed listing of their major works.

During my school years, I was always intrigued with stories about great scientists. Dan Kemp would talk extensively about his thesis advisor, R. B. Woodward, and his works. Those stories about Woodward (1917-1979) and also Gilbert Stork were very influential in my decision to pursue synthetic organic chemistry as a career.

Woodward's memoir was written by Elkan Blout (with assistance from Frank Westheimer) and was published in 2001, a "scant" 22 years after his death.

The memoirs are often glowing: "*Robert Burns Woodward was the preeminent organic chemist of the twentieth century. This opinion is shared by his colleagues, students and by other distinguished chemists.*"

Blout includes lengthy commentaries from Sir Derek Barton, Roald Hoffman and Albert Eschenmoser in the memoir. He concludes with his own insights and observations from their long friendship.

Woodward and James Conant were influenced at Harvard by E. P. Kohler (1865-1938). Kohler's memoir was written by James Conant in 1952. Conant in turn was memorialized by his student Paul D. Bartlett. Bartlett was an immensely influential physical organic chemist. His memoir was written by Frank Westheimer and begins: "*Paul Bartlett was one of the great chemists of the twentieth century. His research and teaching were in the area of physical-organic chemistry, and he dominated that field for perhaps four decades. He wasn't old enough to be among the earliest practitioners; that honor is shared among Arthur Lapworth, A. Hantzsch, C. K. Ingold, and*

*L. P. Hammett. But Bartlett created a school of physical-organic chemistry that sparked a revolution in the way organic chemistry is taught and practiced throughout the world.”*

If the history of Harvard's great chemists and the development of Harvard chemistry are not your interest, you can read the memoirs of A. C. Cope, John Sheehan or George Buchi of M.I.T. Sheehan's memoir was written by E. J. Corey and John D. Roberts. You can also read the memoir of William Barton Rogers, founder of M.I.T., or the memoir of Vannevar Bush, written by Jerome Wiesner.

Edwin Land's memoir was written by his biographer, Victor K. McElheny. The memoir is a far more succinct summary of Land's life than the book.

The best way to find a memoir is to use the search engine. I became intrigued with who was the first female member of the NAS. The search engine did not provide a way to find this person, but Google gave me a quick answer, Florence Rena Sabin (1871-1953), inducted into the Academy in 1925. Her memoir is a fascinating one and well worth reading. Another is the memoir for Margaret Mead.

Florence Rena Sabin was born in Central City, Colorado. Her father abandoned the idea of a medical career to become a mining engineer, leaving the family farm in Vermont for Colorado in 1860, where he married a school teacher from Blackhawk, Colorado in 1868. Florence's mother died when she was young and she and her sister were sent back east to live with their uncle and grandparents in Illinois and Vermont. Florence ultimately attended Smith College with her sister. There she developed her interest in science.

Florence initially taught school in Denver and then was an assistant in zoology at Smith before working at the Marine Biological Laboratories in Woods Hole. However, her ultimate ambition, once she had saved some money, was to attend Johns Hopkins Medical School, which was founded in 1893 with the stipulation by its benefactors that women should be admitted as well as men.

Florence became a protégé of Dr. Franklin Paine Mall, the school's first Professor of Anatomy. She flourished under the guidance of Dr. Mall and his philosophy of education. Her independent work won much acclaim and she was appointed in 1917 Professor of Histology, the first woman to obtain a full professorship in the Johns Hopkins Medical School.

Other non-chemistry memoirs of note is the glowing memoir written about Louis Agassiz, one of the 50 founding members of the NAS. I was also fascinated to find the memoirs for the two protagonists of the "Dinosaur Wars:" Edward Drinker Cope and Othniel Charles Marsh. Their biographers do not shy away from their vicious competition.

I was disappointed that Stephen Jay Gould's memoir has not been written. His book "Wonderful Life" about all the strange and wonderful fossilized creatures discovered in the Burgess Shale is one of my favorites.

The nuclear physicists involved with the creation of the atomic bomb are well represented in the memoirs. Most recently the Philip Morrison and Edward Teller memoirs were published to join that of J. Robert Oppenheimer.

Albert Einstein is there along with Thomas Edison. It is interesting to note that Edison was not inducted until 1927 when he was 80 years old. I guess having a record number of US Patents was not sufficient for membership to the Academy until the sheer volume and economic impact overwhelmed the selectors. Notably, his memoir was published in 1932 only a year after his death.

There is an iPad application that makes accessing the memoirs very simple. You will immediately see a tab listing of eighteen of the most recently published memoirs. This tab is followed by a “featured” tab which is currently honoring NAS Nobel Laureates such as Hans Bethe, Bruce Merrifield, and Theodore William Richards.

I highly recommend these memoirs as an informative and inspirational window into the lives of these great scientists. The NAS membership includes a rich selection of the most influential scientists of the last 150 years. These biographical memoirs are a treasure.