

Nettie Stevens

- Discovered sex determination by chromosomes
- Colleague of Morgan

Nettie Maria Stevens was born in the small town of Cavendish, Vermont, in 1861. The child of working-class parents, Stevens was raised during a time when women's educational opportunities were limited. Stevens was a promising student with a gift for science and mathematics, consistently scoring the highest in her classes. She went to teachers' college in Massachusetts and taught school for nearly 10 years to earn enough money to further her education and attend a university in California.

In 1896, Stevens attended Leland Stanford University. She graduated with a master's degree in biology. After Stanford, Stevens went to Bryn Mawr College in Philadelphia for more graduate work. At the time, Thomas Hunt Morgan was teaching at Bryn Mawr and was one of her professors. In 1903, Stevens got her Ph.D. from Bryn Mawr and was given an assistantship by the Carnegie Institute, after glowing recommendations from Morgan, Edmund Wilson, and M. Carey Thomas, the president of Bryn Mawr.



In 1905, her work on sex determination was published as a Carnegie Institute report. In this first study, she looked at sex determination in the common mealworm. Investigating the mealworms, she found female cells contained 20 chromosomes, but male cells contained 19 large chromosomes and one very small one. She showed that the X body paired with a 20th, much smaller, chromosome in meiosis. She proposed that these two chromosomes be called X and Y, and explained that females contained two X chromosomes.

Although Stevens collaborated with Morgan, most of her work was carried out as an independent investigator. Some believe her position in the field of genetics has largely been ignored because the credit for the discovery of X and Y chromosomes and their role in determining gender is instead generally given Edmund B. Wilson, who had read Stevens' manuscript on chromosomal patterns before publishing his own theory, and T.H. Morgan, the biologist with whom Wilson shared the Nobel Prize for the discovery. Stevens died in 1912.

Resources

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http://biocrs.biomed.brown.edu/Books/Chapters/Ch_7/Ch7-Authors.html

<http://www.intelihealth.com/IH/ihtIH/WSIHW000/9103/8173/172627.html?d=dmContent>

http://www.phschool.com/atschool/biology/Biology_Updates/Unit3.html

<http://web.vtc.edu/WIT/science.htm>