

## The Secret Founder of Ecology

# Ellen Swallow Richards

[ 3 December 1842 - 30 March 1911 ]



## Special Scientific Achievements

Ellen Swallow Richards was the first woman in America to receive a degree in chemistry.

She dedicated 10 years of her life to the promotion of women in scientific studies, established and directed a laboratory for women.

Ellen Swallow Richards analyzed water and waste water systems, and developed quality standards for water.

She published on the topics of: Health considerations for air, water and nutrition.

**1842** Ellen Swallow is born in Dunstable/ Massachusetts, USA, on December 3.

**1859** She must help on the family farm and care for her ill mother. Nevertheless, she occupies herself with courses in mathematics, French, and Latin. At 25, and with large effort, she has saved enough money with which to study.

**1868** Ellen Swallow begins her study of chemistry at the famous Vassar College in New York – the oldest “Women’s College” in the USA.

**1870 - 1873** Ellen Swallow graduates and continues her study of chemistry at the Massachusetts Institute of Technology (MIT). She completes her study with a Master of Arts in Chemistry from Vassar College. With this, she becomes the first woman in the USA to receive a degree of this kind.

**1873 - 1878** Ellen Swallow teaches at MIT – the first female instructor at a scientific university.

**1875** She marries Metallurgy Professor R. H. Richards, who supports her work.

**1876** She is engaged in the establishment of a scientific laboratory for women at MIT.

**1884** Ellen Swallow Richards becomes professor at the first water management laboratory at MIT.

**1887 - 1897** She works as official water analyst at the Massachusetts Institute of Technology. She develops quality standards for the water in Massachusetts.

**1890** The MIT establishes an educational program for Sanitary Engineering, the first of its kind. Within the framework of this program, Ellen Richards teaches generations of students about water analysis, waste water, and air. Many of these students later become prominent in the new area of “environmental sanitation” – a preliminary stage of Ecology.

**1899** To build interest in teachers in the new field of home economics, Ellen Swallow Richards organizes a summer conference at Lake Placid, New York.

**1908** She founds the first Home Economics Association and becomes president.

**1910** Publication of a journal for home economics.

**1910** She receives an honorary doctorate from Smith College.

**1911** Ellen Swallow Richards dies in Boston, on March 30, as a result of heart ailments.