

Continuum of Greatness

*The Hall of Fame for Great Americans
at Bronx Community College , CUNY*



Asa Gray

1810 -1888

*“I am unable to perceive that the idea of the evolution of one species from another and all from an initial form of life, adds any new perplexity to theism”
from *Natural Science and Religion**

Hall of Fame Facts

Asa Gray (1810-1888)

- Elected into Hall of Fame: 1900
- Asa Gray was among the first 29 persons to be elected into the Hall of Fame
- Gray received 51 out of 97 votes.
- Sculpture by: Chester Beach, 1925 .

Asa Gray

November 18, 1810—January 30, 1888



Asa Gray, described as “Darwin’s Dove” and the “Godfather” of Darwinism, is one of the few scientists that was able to effectively communicate Darwin’s theory of Evolution to the public without inspiring fear or antagonism. Asa Gray was born in 1810 in Sauquoit, which is in upstate New York. Gray received a doctor of medicine degree at the age of 21, but his attention was held by Botany. He began collecting plants for John Torrey, his mentor. John Torrey was an eminent botanist who had published *A Flora of North America* and was soon joined by Asa Gray in the subsequent publications of *A Flora of North America* between the years 1838-1842. Gray continued to work with Torrey for thirty years and together they collected and developed impressive herbaria.

In 1838 Gray was appointed as a professor of Botany at the University of Michigan followed by an appointment at Harvard University in 1842 where he remained until his retirement in 1873. On his retirement, Gray traveled extensively in North America and Europe and worked to produce his major treatise on North American Flora.

Asa Gray is perhaps, more importantly, remembered as a prominent figure in the development of evolutionary thought in America. It all began in 1851 when Asa Gray and his wife Jane Loring Gray visited the Kew Gardens in England. They happened to meet Charles Darwin there and Jane Gray remembered him as a live, agreeable person. A few years later in 1855, Darwin used this brief meeting with Gray to initiate a correspondence. In his first letter to Gray, Darwin referred to Torrey and Gray’s book and requested botanical evidence for “variation” a vitally important aspect of Darwin’s developing theory of evolution. The correspondence between Darwin and Gray would last until 1881 just before Darwin’s death during which time they exchanged some 200 letters. One such letter was held as proof that Darwin had already developed his theory of evolution before Alfred Russell Wallace who reached the same conclusions as Darwin in 1858. In a letter dated September 5, 1857, Darwin familiarized Gray with his major discovery regarding the origin of species through natural selection, which he had developing for more than 20 years.

Gray’s role in Darwin’s theory became even more prominent following the publication of Darwin’s book titled *Origin of Species by means of Natural Selection in 1859* when he reviewed the book in the American Journal of Science. Without openly defending Darwin’s theory in any way, Gray assembled a vast array of facts in such a reasonable way that it would have been difficult not to be objective about the theory.

1851

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Charles Darwin meets Asa Gray.

1857

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Darwin writes to Asa Gray discusses his thesis of the origin of species through natural selection.

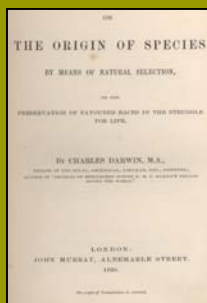


1859

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Darwin publishes *Origin of Species by means of Natural Selection*.

1871

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Darwin publishes the *Descent of Man*, beginning the discussion of human evolution.

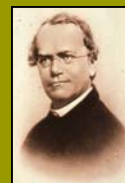


1859-1888

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Gray defends Darwin’s idea in America without antagonizing religious anti-Darwinists. Thanks to the efforts of Asa Gray and others the “origin of species through natural selection” is widely accepted by the scientific mainstream.

1900

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Gregor Mendel’s experiments with garden peas heralds the beginning of classical genetics. Mendel provided evidence for the mechanism by which hereditary characteristics are passed on from one generation to the next.



If Gray had chosen to defend Darwin's theory, it would have been sure to produce fear and rejection from many readers. Thus began Asa Gray's journey as Darwin's defender who carefully balanced natural science and theology in his attempt to communicate the theory of evolution to the American public.

Darwiniana; Essays and Reviews Pertaining to Darwinism

One of the most important essays that Gray wrote on the subject of evolution and theology was titled, *Natural Selection not inconsistent with Natural Theology* and appeared in the Atlantic Monthly in 1860. This essay reveals Gray's patience, gentle tolerance, and unflinching determination to communicate Darwin's theory without ruffling feathers. Darwin himself was particularly taken up by Gray's essay that he wrote in his letter to Gray in September 1860: "You will be weary of my praise, but it [the essay] does strike me as quite admirably argued and so well and pleasantly written. I said in a former letter that you were a lawyer, but I made a gross mistake. I am sure that you are poet. No, by Jove, I will tell what you are, a hybrid, a complex cross of a lawyer, poet, naturalist, and theologian!"

Consulted Sources:

- Dupree, Hunter.** *Asa Gray: American Botanist, Friend of Darwin*, John Hopkins University Press, 1988.
- Gray, Asa.** *Review of the Origin of Species by Means of Natural Selection*, American Journal of Science and Arts, March 1860.
- Gray, Asa.** *Natural Selection not inconsistent with Natural Theology*, Atlantic Monthly, July 1860.
- Gray, Asa.** *Darwiniana: Essays and Reviews Pertaining to Darwinism*, New York, D. Appleton and company, 1876.
- Gray, Asa.** *Natural science and religion: two lectures delivered to the Theological School of Yale College, by Asa Gray*. New York, C. Scribner's Sons, 1880.
- Ward, Lester.** *Asa Gray and Darwinism*, 1888, p. 85-92. (pamphlet)



The **Asa Gray House** is a historic house located at 88 Garden Street, Cambridge, Massachusetts. It is a National Historic Landmark. The house was designed in 1810 by the architect Ithiel Town. It housed the ornithologist Thomas Nuttall who, incidentally, helped Asa Gray and John Torrey in their work on the *Flora of North America*. Asa Gray lived in this house during his time in Harvard and also beyond his retirement.

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Graphic design and layout by Chrystal Joseph.

1930's-1940's

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Modern Evolutionary Synthesis— Theodosius Dobzhansky, Ernst Mayr, and George Gaylord Simpson integrate Mendel's theory of inheritance with Darwin's theory of evolution.

1953

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James D Watson and Francis Crick discover the structure of DNA signaling the beginning of molecular biology.

1975

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E.O. Wilson publishes *Sociobiology: The New Synthesis* that links animal behavior and human behavior to evolution.

1976

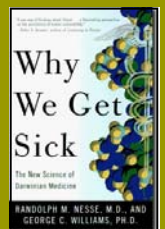
↓
Richard Dawkins publishes *The Selfish Gene* an important milestone for the field of molecular evolution.

1992

↓
Evolutionary Psychology Jerome Barkow, Leda Cosmides, and John Tooby publish *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*, launching the beginnings of evolutionary psychology.

1995

↓
Evolutionary Medicine Randolph Nesse and George C Williams publish *Why We Get Sick: The New Science of Darwinian Medicine*.



Asa Gray's Contributions to Botany:

Gray, Asa. *The botanical text-book : an introduction to scientific botany, both structural and systematic : for colleges, schools and private students*, New York : George P. Putnam, 1850.

Gray, Asa. *Botany for young people and common schools : how plants grow, a simple introduction to structural botany : with a popular flora, or an arrangement and description of common plants, both wild and cultivated*, New York : Ivison, Blakeman, Taylor, 1858.

Gray, Asa. *First lessons in botany and vegetable physiology*. New York, Ivison, Phinney, Blakeman, 1867.

Gray, Asa. *Botany for Young People Part II: How plants behave: how they move, climb, employ insects to work for them*, New York, Ivison, Phinney, Blakeman, 1875

Gray, Asa. *Synoptical Flora of North America*, Smithsonian institution, Washington. New York, Ivison, Blakeman, Taylor, and company 1886

Gray, Asa. *Field, forest, and garden botany; a simple introduction to the common plants of the United States east of the 100th meridian, both wild and cultivated*, New York, Cincinnati [etc.] American book company, 1895

For Further Reading:

Darwin, Charles. *Origin of Species by means of Natural Selection*, New York, Appleton, 1860.

Gray, Jane Loring. *Letters of Asa Gray*, Boston, New York, Houghton, Mifflin and Company, 1893.

Mayr, Ernst. *One long argument : Charles Darwin and the genesis of modern evolutionary thought*,

Cambridge, Mass. : Harvard University Press, 1991.

Useful Asa Gray Websites:

For Asa Gray's contributions to Botany and Evolution:
<http://www.huh.harvard.edu/libraries/asa/asabio.html>

For correspondence between Asa Gray and Darwin:
<http://www.darwinproject.ac.uk/darwinletters/namedefs/namedef-1957.html>

For essays and reviews by Asa Gray relating to Darwinism:
<http://www.darwinproject.ac.uk/content/view/81/66/>