

Benjamin Banneker

Banneker, Benjamin



Record Information

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Date: b. 1731–d. 1806

Description:

Benjamin Banneker excelled in every area of scientific inquiry that he pursued. Born in 1731 in Ellicott's Mill, Maryland, Banneker studied mechanical science at a private school. Also a student of astronomy, he once accurately predicted a solar eclipse. Nominated by Thomas Jefferson, Banneker served for two years on the committee to plan and survey the city of Washington, which later became Washington, D.C. After serving on the planning committee, he returned to his farm in Maryland, where he published an annual almanac. Banneker is remembered for his support of pacifism. In 1793 he proposed that the federal cabinet include a secretary of peace and that the trappings of military service be eliminated so that the horrors of war would not be obscured.

Banneker was born free in Baltimore County, Maryland, and spent his life on his parents' farm. His grandmother, an English indentured servant named Molly Welsh, taught him to read and write. At age 12, **Banneker** began attending school, where he displayed a strong talent for mathematics, often making up math puzzles for the fun of solving them. While in his late teens, he saw a pocket watch for the first time and decided to build a clock himself. After spending two years carving all the gears from wood, he constructed the first clock ever made in America with nonimported parts. It kept perfect time for over 40 years.

Around 1771, **Banneker** became friendly with the Ellicotts, five Quaker brothers who had purchased land adjoining his property. From them, **Banneker** borrowed various science books, from which he taught himself astronomy. When an Ellicott cousin, Major Andrew Ellicott, was appointed to Pierre L' Enfant's team to conduct a survey of what would later become Washington, D.C., **Banneker** was hired to assist him. He maintained the field astronomical clock and compiled astronomical and other necessary mathematical data.

In 1791, and again in 1792, **Banneker** compiled an ephemeris, an astronomical report providing mathematically computed positions for the various stars and planets for every day throughout the year. He sent a copy of the 1792 ephemeris to Thomas Jefferson, along with a letter promoting the abolition of slavery. Jefferson was so

impressed with **Banneker**'s work that he forwarded it to the Académie des Sciences in Paris. The ephemeris, along with a good deal of antislavery material, became a part of *Benjamin Banneker's Pennsylvania, Delaware, Maryland and Virginia Almanack and Ephemeris, for the Year of Our Lord, 1792*. The almanac sold well, and **Banneker** continued publishing almanacs and/or ephemerics until 1804. His work was often cited by abolitionists as proof that blacks were the equal of whites in intelligence and sensitivity.

Benjamin Banneker is best known for the almanacs in which he calculated the ephemerides. Ephemerides are tables that give the positions of the planets and stars for each day of the year. **Banneker**'s almanacs were published from 1792 through 1797, and were widely distributed in the United States. One almanac went to President Thomas Jefferson (in manuscript form), along with a note from **Banneker** saying that slavery should be abolished. Jefferson's praise of **Banneker**'s almanac became part of an antislavery campaign.

Banneker is also known for helping to survey the territory that became the nation's capital, Washington, D.C., determining the boundaries, area, and elevations of land, by means of measuring angles and distances. At that time, surveying an area involved making charts of the positions of the stars from different parts of the area. Comparing the different angles of the stars helped surveyors know how far apart two different points were.

In 1791, although almost 60 years old and often sick, **Banneker** assisted chief surveyor Major Andrew Ellicott with the capital territory project. **Banneker** worked in the observatory tent, where he made and recorded astronomical observations, maintained the field astronomical clock, and compiled other data. It was this experience that led him to calculate the ephemerides and publish his almanac.

The self-taught astronomer and mathematician was born on November 9, 1731, near the Patapsco River in Baltimore County, Maryland. **Banneker**'s father was a freed slave named Robert (we don't know his last name); his mother, Mary Bannka, was the daughter of a freed slave and an indentured Englishwoman. (At this time, people who wanted to earn money to go to America often indentured themselves to someone who had the money; that is, they promised to work for the person for several years in exchange for room, board, and the price of their transatlantic ticket.) This woman, Molly Welsh, had established a farm, bought two slaves, freed them, and married one of them. The man she married was named Bannka, which became the source of the name "**Banneker**."

Banneker spent his life on the tobacco farm that his father established. He had little formal education beyond a few seasons at the country school. However, he was naturally gifted in mathematics, teaching himself after hours spent working in the fields. At 21, the talented young **Banneker** built a clock with wood-carved gears, using as a guide a pocket watch that he had once examined. This complicated clock continued to strike every hour for 40 years.

In 1759, Banneker's father died. Banneker remained on the farm even after the marriage of his three sisters and the death of his mother. Except for frequent visits from his sisters, he lived in relative isolation from the community. Slavery was still active in Maryland, and Banneker was probably afraid of persecution because of his color. In 1771, Banneker's life took an eventful turn. The Ellicott brothers, a Pennsylvania Quaker family, purchased a large tract of land next to Banneker's farm. They developed this land into a major mill center, where grain was milled into flour. Banneker made friends with George Ellicott, the son of one of the founding brothers. Ellicott gave Banneker several books about astronomy, as well as instruments for observing the stars. Without any further help, Banneker taught himself astronomy and calculated an ephemeris (the position of the celestial bodies) for the year 1791. Although several publishers rejected this effort, Banneker continued to study.

In 1791, George Ellicott's cousin, Major Andrew Ellicott, received his commission to survey the "Federal Territory"—now known as the District of Columbia. From his cousin, Major Ellicott learned of Banneker and hired him as his scientific assistant. After helping Ellicott, Banneker calculated the ephemeris for 1792. With the Ellicott family's assistance, he reached the Pennsylvania and Maryland abolition societies. They sponsored publication of his work—the same work that President Jefferson praised.

Then they cited Banneker's work as proof that, as Senator James McHenry put it, "the powers of the mind are disconnected with the colours of the skin." Banneker was encouraged by his success and retired from tobacco farming to devote himself full time to work on these almanacs that bore his name. The books he produced through 1797 went into several editions and were widely distributed. After 1797, times became more difficult for Banneker. The nation became less interested in abolition, so there was less interest in books by black people. Banneker still continued to calculate ephemerides until 1804, but he was no longer able to publish his work.

During Banneker's final years, he lived alone in his log house, reading and writing. He visited the Ellicotts' mill and store frequently, and was often visited by two of his sisters. He died in October 1806.

After his death, Banneker was memorialized in various ways and referred to as "the first Negro American man of science." Silvio Bedini's 1972 review of his work suggests that without the limitations of opportunity caused by racism and his isolated location, Banneker would certainly have become a more important figure in early American science.

Further Information

Bedini, Silvio. *The Life of Benjamin Banneker*. Baltimore, MD: Maryland Historical Society, 1998.