

Benjamin Banneker

An extraordinary life in early America

1731 - 1806

Self-educated

Farmer

Surveyor

Astronomer

Almanac Author

Abolitionist



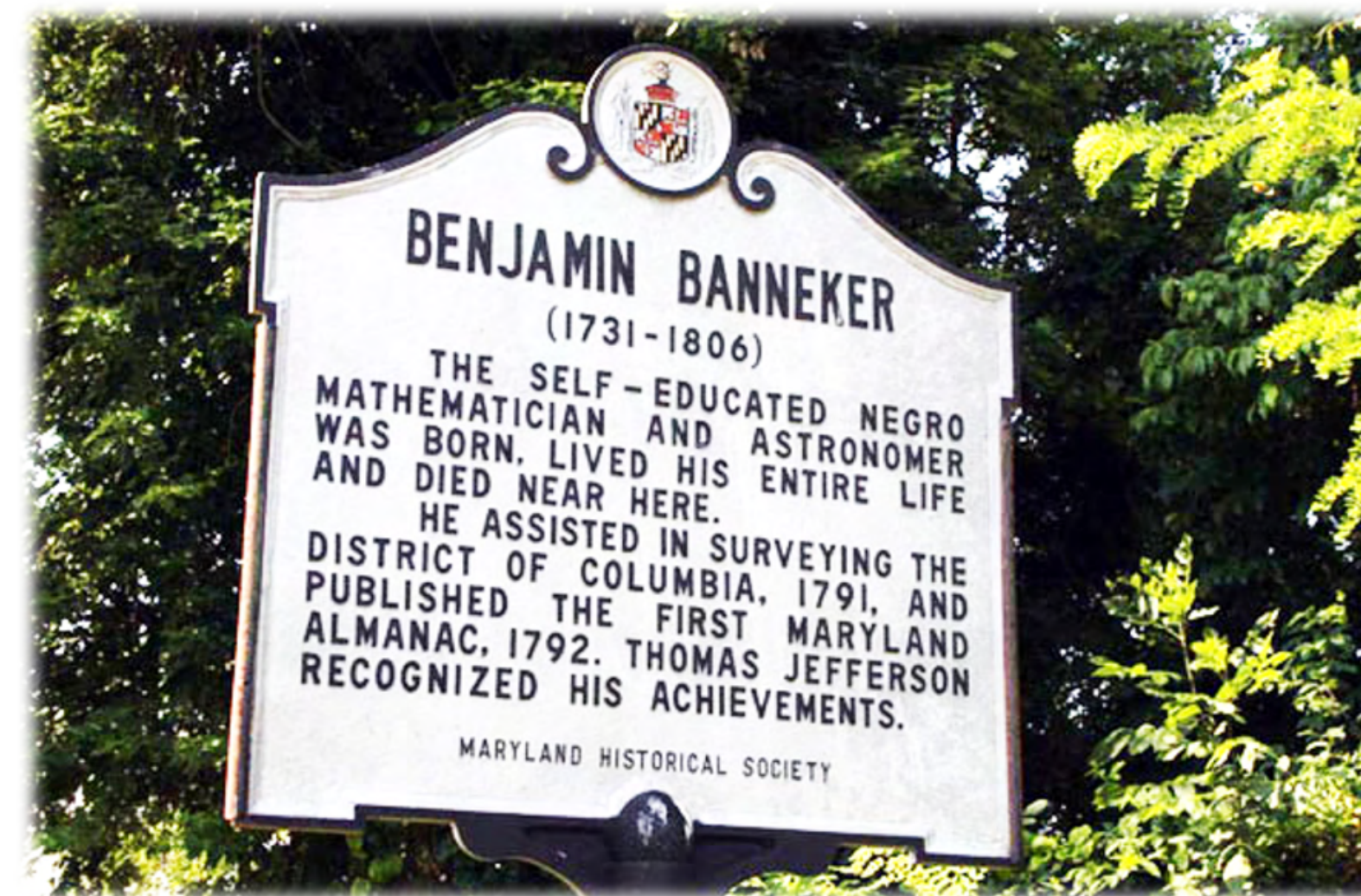
WOODSONCENTER

Benjamin Banneker

Benjamin Banneker was a free Black landowner who was born during the colonial period, lived through the American Revolution, and died when America was a young republic.

Banneker was largely self-taught and is remembered for his scientific achievements, helping to map the boundaries of the District of Columbia, and his public opposition to slavery.

Although he made a living as a tobacco farmer, Benjamin achieved success and national fame relatively late in life through his popular series of almanacs.



Benjamin Banneker's Family

Benjamin Banneker's mother, Mary, was born free to a Senegambian man named Bannaka and an Englishwoman named Molly Welsh. His father was a Guinean man who later took the name Robert along with Mary's last name. Both Bannaka and Robert were once owned as slaves, and then freed, by the women they later married.

While most Black people in America were enslaved until 1865, there were always significant populations of "freemen," beginning in the colonial period. According to the 1830 census, Maryland was home to 52,000 free Blacks—the largest number in any state at that time.

The descendants of Benjamin Banneker's many sisters and aunts were surely among them.

19th century portrait of a free woman of color and her fair-skinned daughter in New Orleans, another major center of free Blacks.



Colonial Farmstead

Benjamin Banneker was born in 1731 in Baltimore County, Maryland. He lived his entire life on the family's 100-acre tobacco farm. When he grew up, he inherited the family farm, which made him financially self-sufficient throughout his life. In addition to selling tobacco, he kept a vegetable garden, a bountiful orchard, and several honey-producing beehives.

Reconstruction of Banneker's cabin in Catonsville, Maryland.





Early Intellectual Aptitude

As a child, Banneker briefly attended a nearby Quaker school, and his grandmother, Molly, often read to him from the Bible. But most of what he learned was self-taught from books he borrowed from neighbors. (Books were very rare and valuable during this time period in America!)

From an early age, Banneker showed an aptitude for technical knowledge. He may have also received some basic knowledge of astronomy from his family; many West African peoples, such as the Dogon, have a deep folk knowledge of celestial objects and their motions.

*Inside Banneker's
Reconstructed Cabin.*



Early Intellectual Aptitude



Young Benjamin loved mathematics, teaching himself algebra, geometry, and trigonometry and designing math puzzles to amuse his friends and family.

Later, the preface to one edition of his almanac declared:

“The colour of the skin is in no way connected with strength of the mind or intellectual powers.”

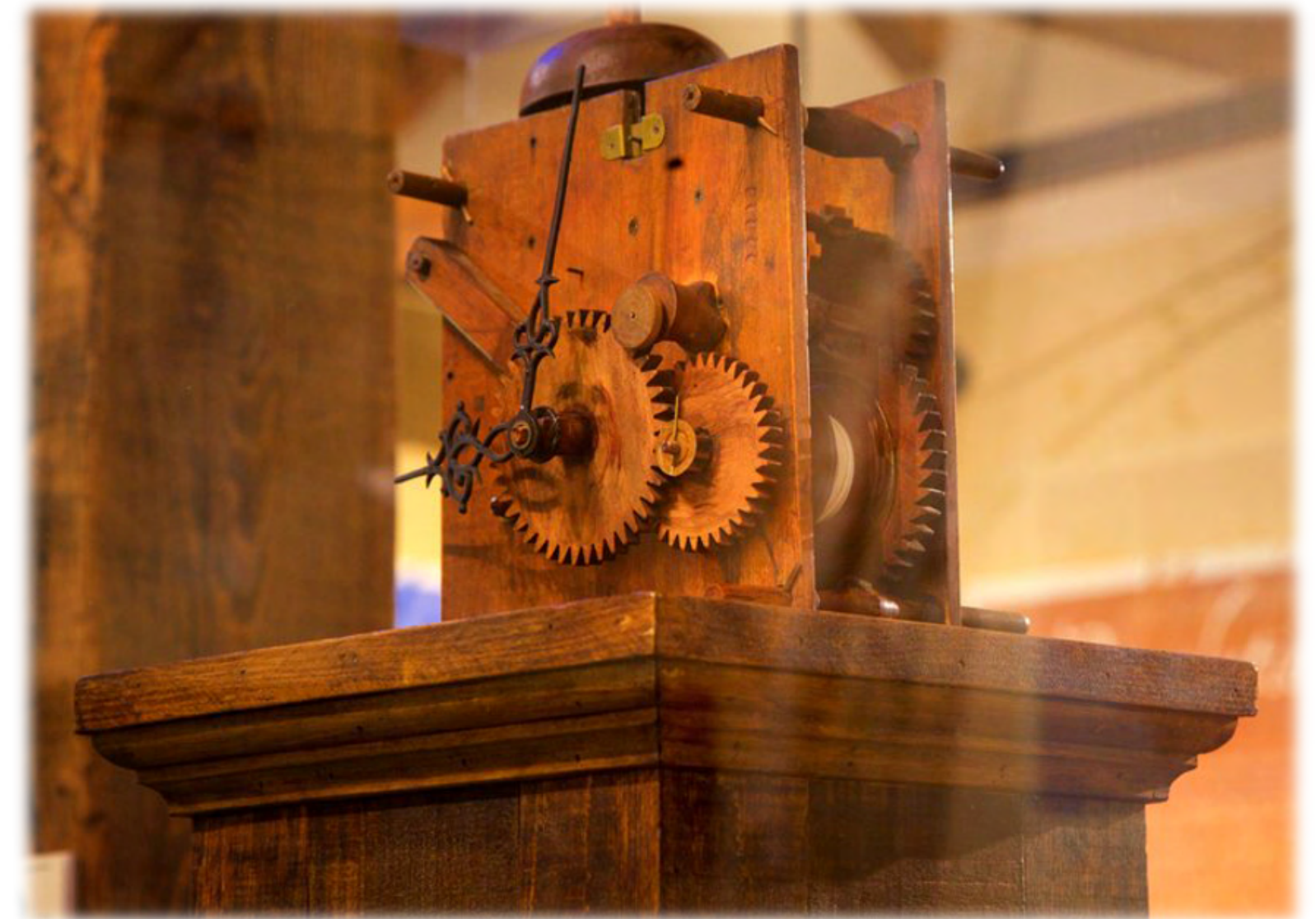


Wooden Clock

At age 21, Benjamin built a wooden clock that accurately struck the hours throughout his life. Based on a borrowed pocket watch that he took apart, Banneker carved the clock works by hand and re-created each part at a larger scale.

Such clocks were almost unknown in rural Maryland, and it attracted observers and admirers to Banneker's home. According to local tradition, the clock kept faithful time for over 50 years, until it was destroyed in a fire on the day of Banneker's funeral.

Replica of Banneker's wooden clock on display at the Benjamin Banneker Historical Park and Museum.



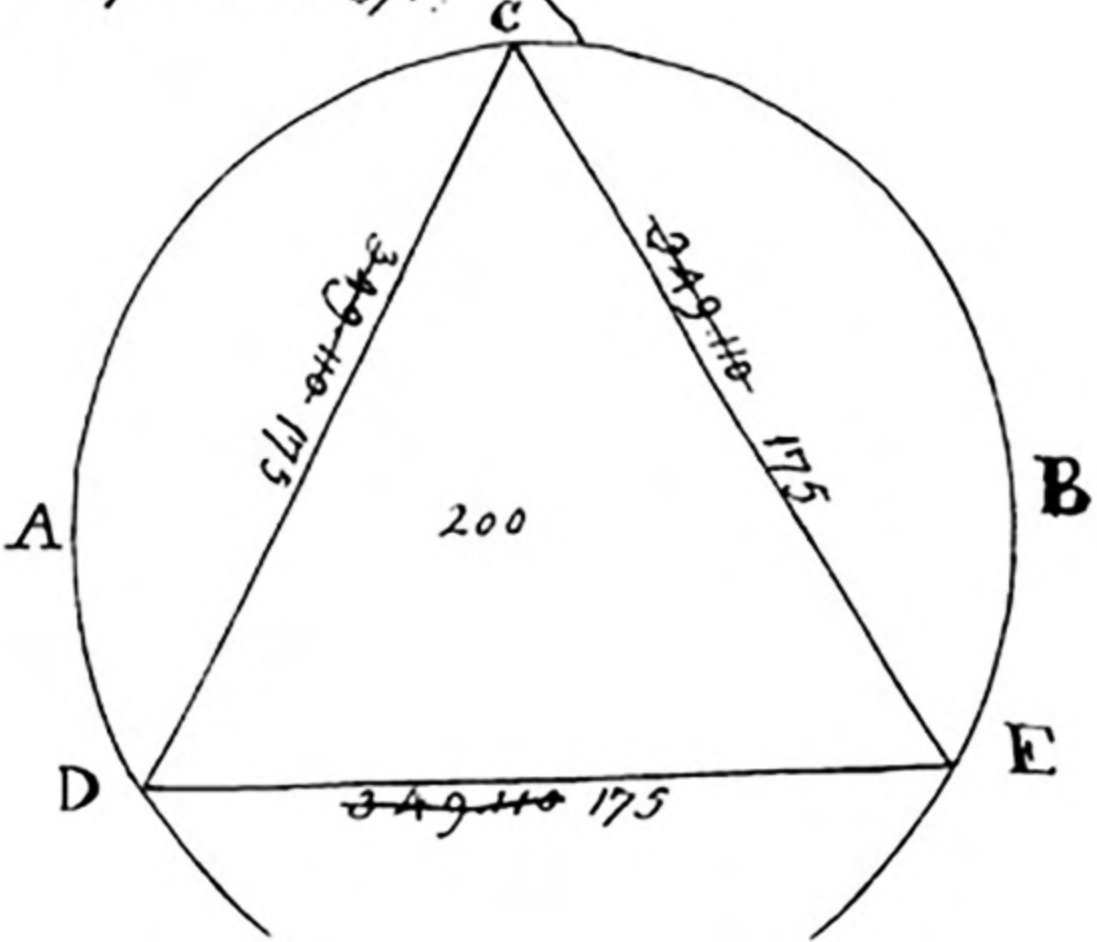
Fascination with Numbers and Mathematics

Math was Banneker’s lifelong passion, and his surviving journals are filled with calculations and geometric drawings. Though he seems to have originally learned mathematics for his own delight, this knowledge proved essential to his later work in surveying and astronomy.

Almost all of what we know about Banneker’s private work and inner life comes from journals that survived in the care of a neighboring family for several generations.

Required the Lengths of the Sides of an Equilateral Triangle, inscribed in a Circle whose Diameter is 200 perches with a general Theorem for all Such Questions
Solution of the above problem, —————

10.00.....0.142.....200
1000)6281400
6281400
209466
69822
134644
349175
Length of the periphery - 628.1400
1/3 of the length of the periphery - 209.466
1/3 of 1/3 of the periphery - 69.822
2/3 Length of the sides required - 349.175



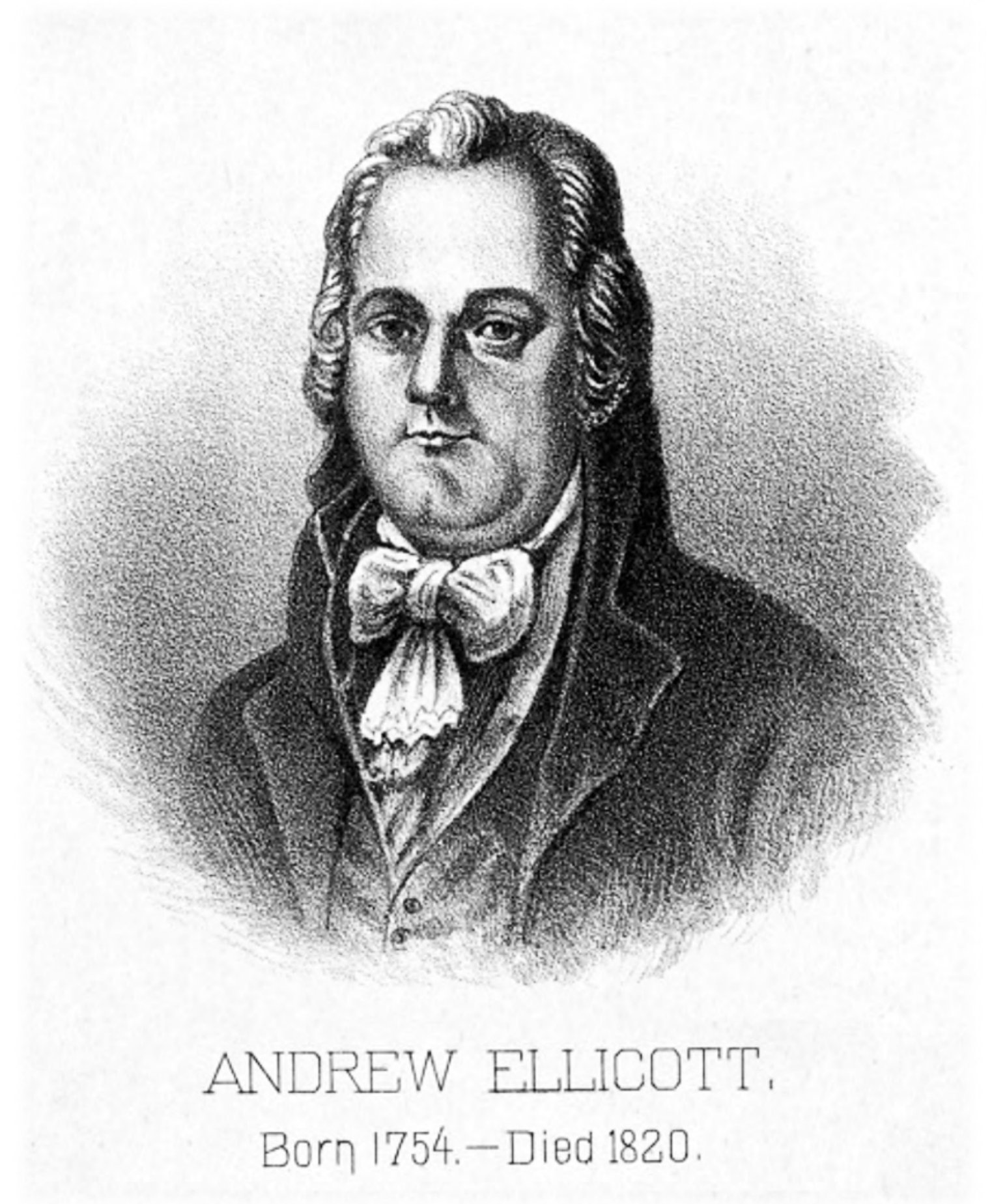
Notes from a journal belonging to Banneker.

Lifelong Friends

Among Benjamin's most important friends were the Ellicotts—an influential family of abolitionist Quakers who arrived in Baltimore County in 1771 to build a flour mill on the Patapsco River. They lived near Banneker's farm and brought with them industry and culture that opened new horizons for Banneker, now in his 40s.

The Ellicotts provided Banneker access to resources and social connections that would have otherwise been unthinkable for a free man of color in the eighteenth century.

Do you know what a Quaker is? What do Quakers believe?





Lifelong Friends

Banneker assisted Major Andrew Ellicott in the survey of the “federal territory” that became the District of Columbia, and was especially close with Andrew’s cousin George Ellicott, who loaned Banneker crucial reference books and astronomical instruments.

This 1968 image by artist William A. Smith depicts Andrew Ellicott and Benjamin Banneker during the survey of the federal territory as described by later memoirs.



Surveyor of America's First Federal Territory

In 1790, President George Washington selected Andrew Ellicott to survey the new federal territory as established by Article One, Section Eight of the Constitution and the Residence Act.

In 1791, Ellicott asked Banneker to be on the survey team. He was hired for his astronomical and mathematical knowledge. Banneker had to trudge through swampy land putting down milestone markers and spend long nights awake using a specialized telescope called a *zenith sector* to track and record the motion of the stars.

President George Washington asked Major Ellicott to help develop a plan for the city of Washington. The land he and Banneker surveyed became the District of Columbia in 1801.



Transit used in the survey of Washington, D.C.,
by Andrew Ellicott, Benjamin Banneker, and others.
A. E. Douglas, Smithsonian Institution Image 96-2220-11



Surveyor of America's First Federal Territory

The land was to have a ten-mile boundary on each side, for a total of 100 square miles, according to the Constitution.

For every mile of the perimeter the survey team laid down boundary markers.

Many of the boundary markers have disappeared over the years but a few still exist. Some of those remaining commemorate Banneker's contribution.

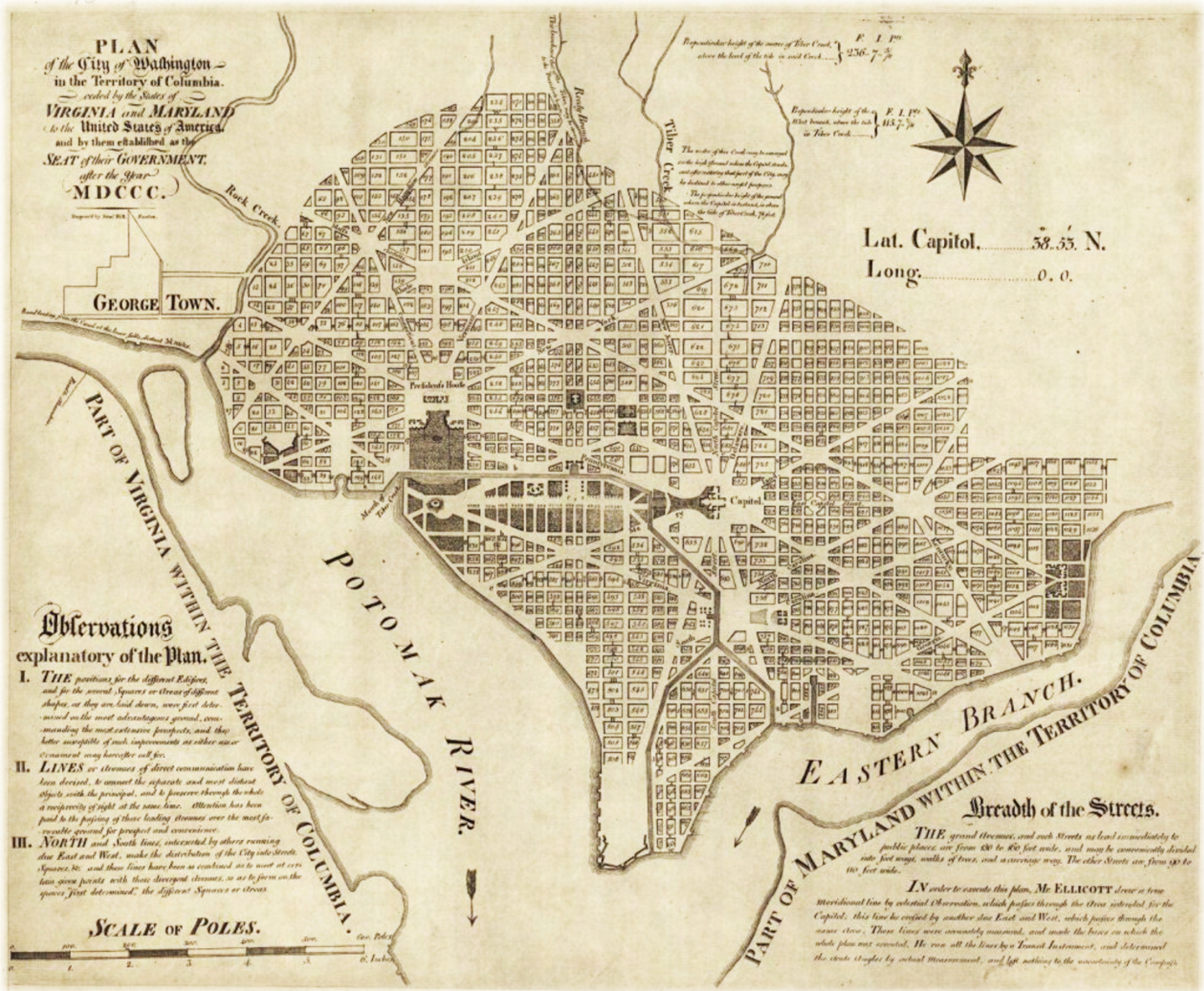


Surveyor of America's First Federal Territory

This is the city plan for Washington, D.C. as drawn up by Andrew Ellicott.

The plan was based on the designs of Pierre L'Enfant, the brilliant but temperamental French engineer and Revolutionary War veteran. L'Enfant was dismissed from his commission to plan the city after conflicts with government officials overseeing his work.

In 1846, D.C. gave the Virginia portion of the District back to Virginia, leaving the District we have today.

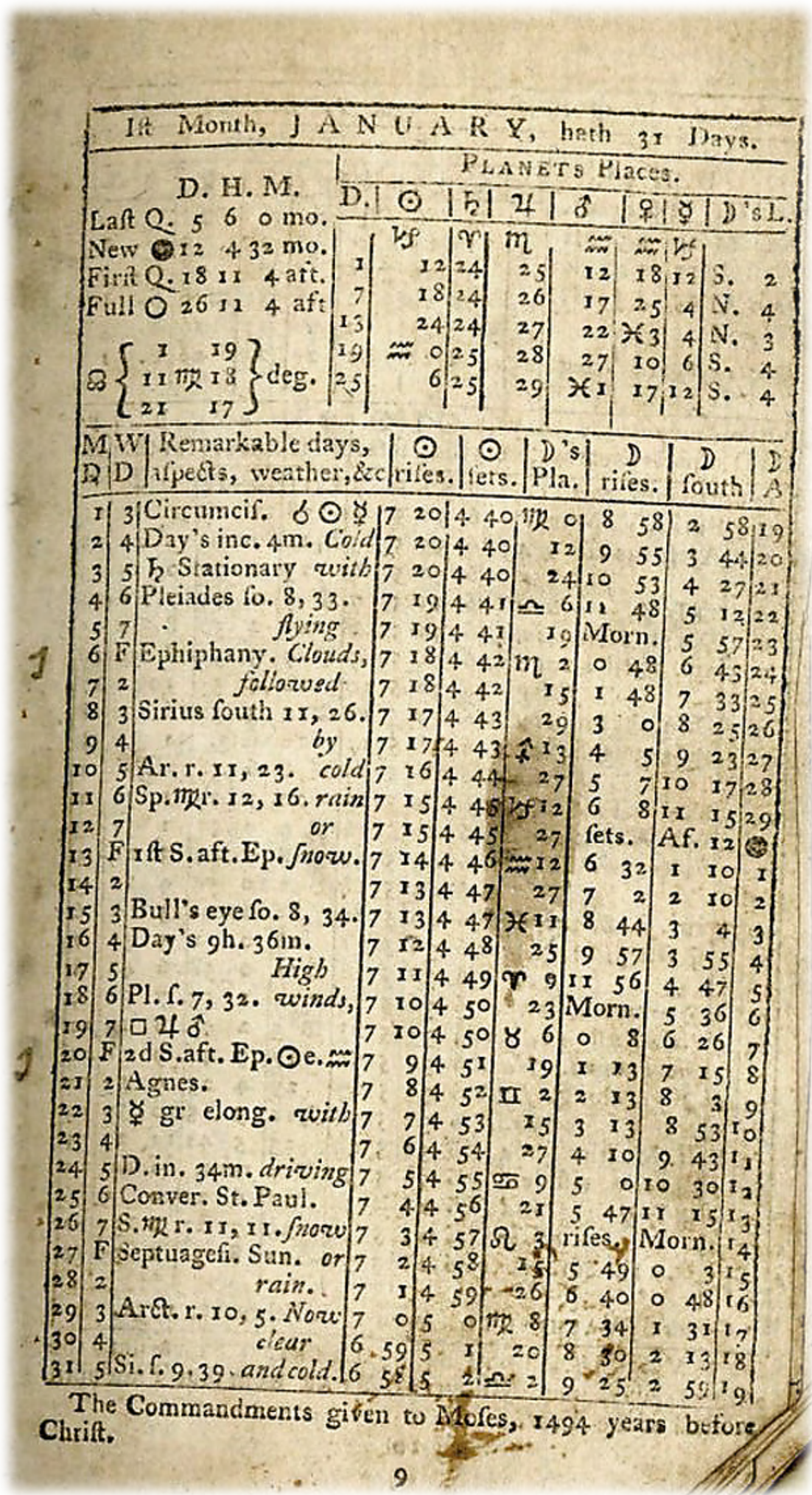


Putting His Knowledge & Skill to Work

Wherever Banneker's knowledge of stargazing originated, we know that he used his deep mathematical knowledge, along with the textbooks and training provided by the Ellicotts, to develop his expertise in astronomy.

Banneker borrowed astronomical instruments, including a telescope, and began recording *ephemerides*—lists of celestial bodies and their locations at certain times. He compiled an entire almanac—an annual calendar containing important dates and statistical information such as astronomical data, weather forecasts, and planting dates.

Many Americans in Banneker’s day owned only two books, if any: the Bible and an almanac.



Self-taught Astronomer



Benjamin Banneker
Mathematician & Astronomer

On April 15, 1791, Banneker watched Ellicott ceremonially install the first stone marker at Jones's Point, the southernmost point of the federal territory's boundaries in Alexandria, VA.

Upon returning to his farm in Maryland, Banneker sought to continue his astronomical studies—the eventual fruit of which would be his almanacs.

Now in his 60s, what Banneker wanted most in his final years was the solitude his studies demanded. He had only discovered the wonders of astronomy late in life and hoped to pursue his observation of the night sky while he still had his health and the strength to stay awake through the night.

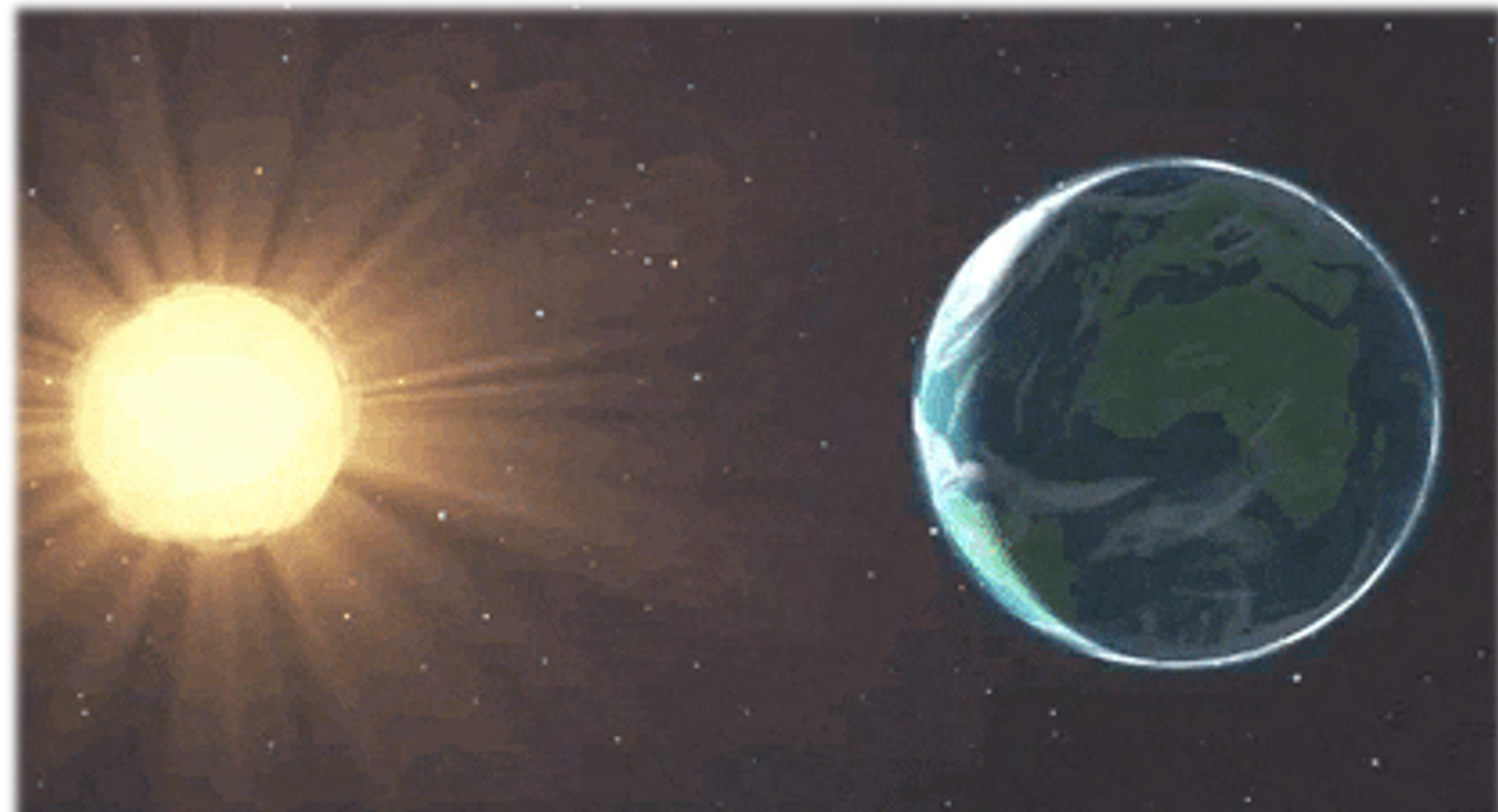


Self-taught Astronomer

In 1788, Banneker accurately predicted the solar eclipse of 1789.

Predicting eclipses had long been the province of professional astronomers. The techniques for doing so were not commonly taught.

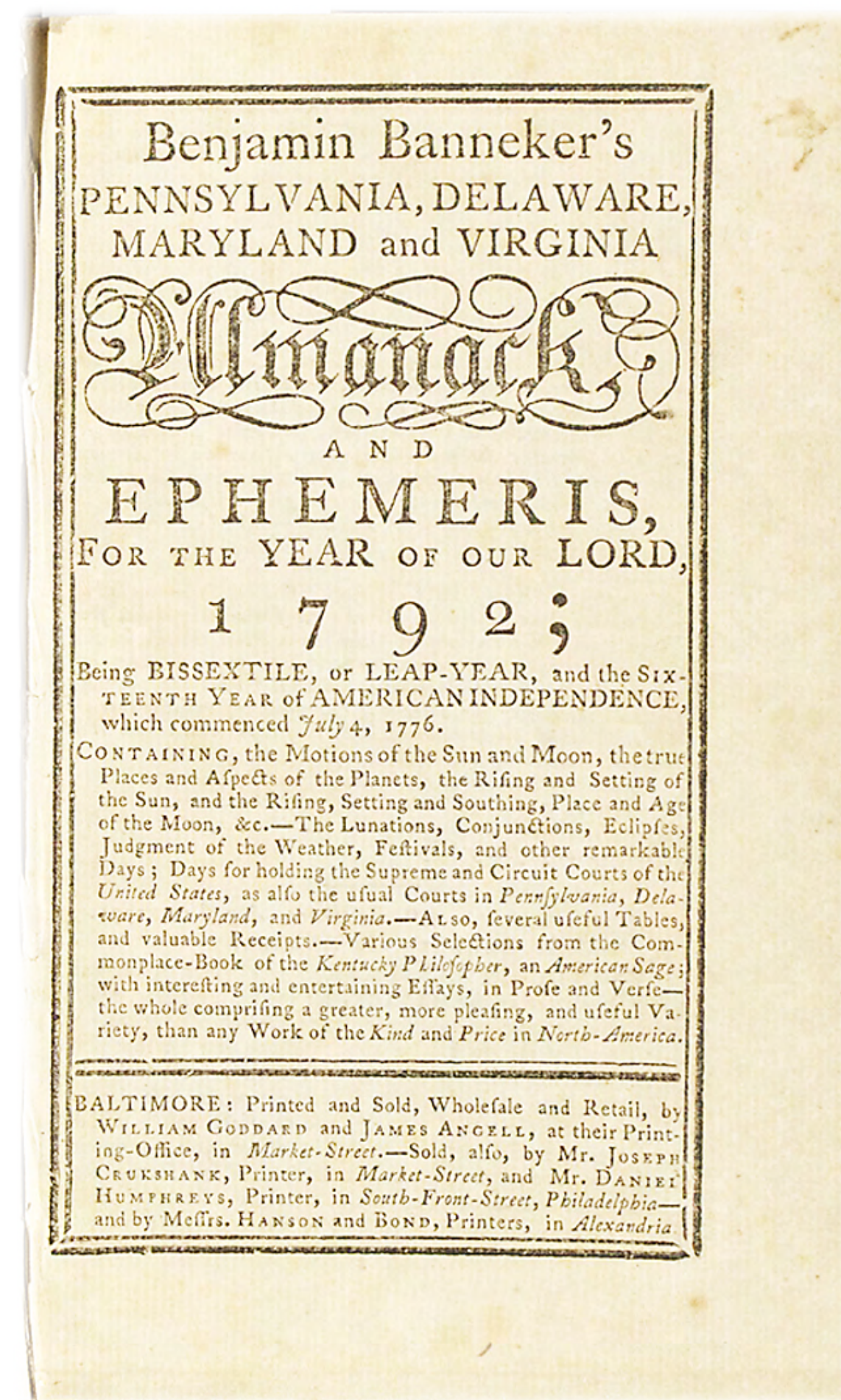
Banneker also calculated Greenwich Mean Time by the eclipses of Jupiter's Galilean moons.



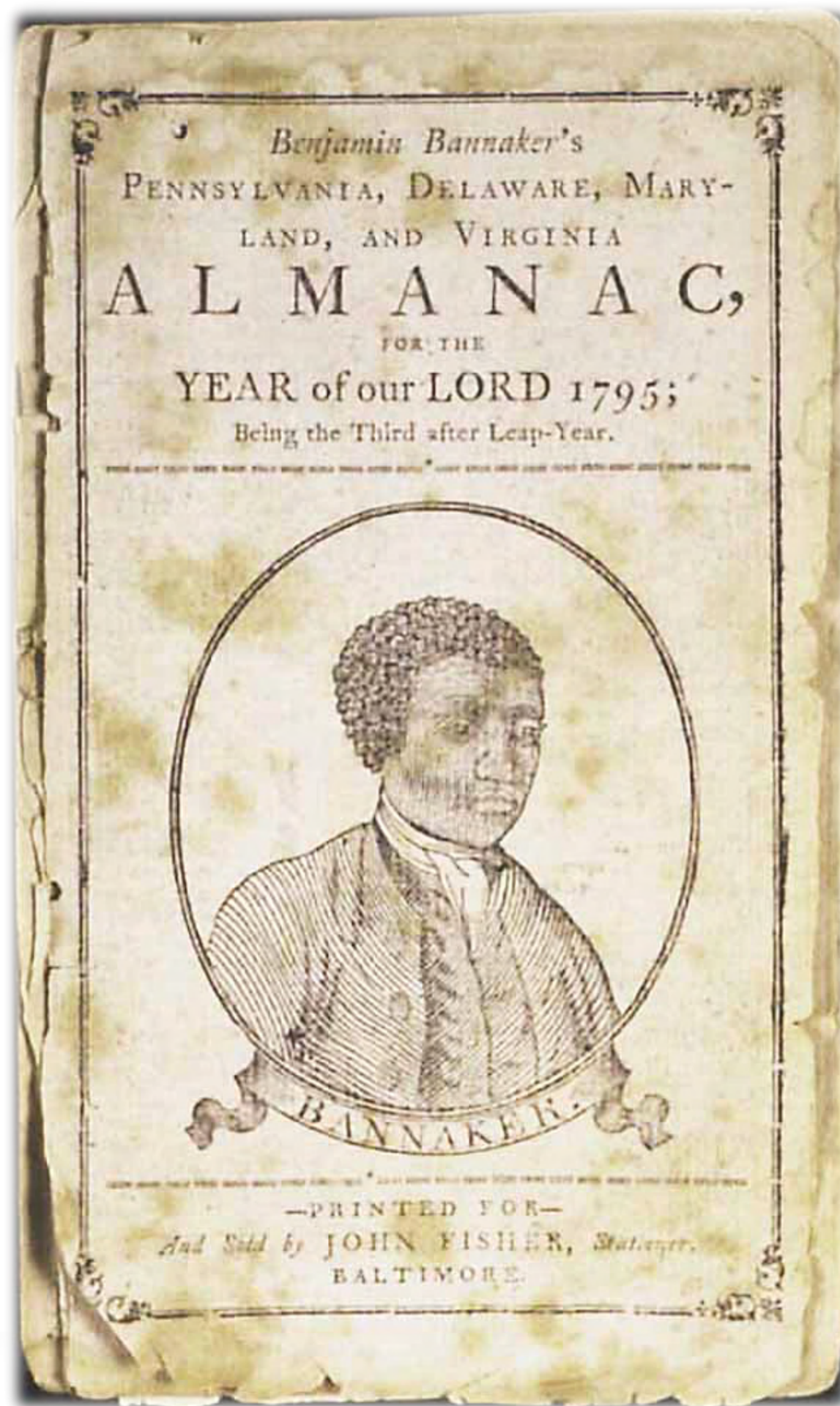
Almanacs

Benjamin Banneker achieved success and fame with his popular series of almanacs, beginning in 1792. They were endorsed by Revolutionary War hero, signer of the Constitution, and Maryland Senator James McHenry.

Banneker's almanacs were promoted by the abolitionist societies of both Pennsylvania and Maryland, and they sold widely in the U.S. as well as in England. At least twenty-eight separate editions of his almanacs were published.



Almanacs



People who did not have clocks depended on an almanac to give them sunrise and sunset times so they could tell the time of day. His almanacs also listed phases of the moon, eclipses, and other calculations for celestial navigation.

Banneker's almanacs included a very useful tide table for the Chesapeake Bay region. This unique feature, which no other almanac offered, made them particularly desirable for river pilots, fishermen, and others earning their living from, or simply living nearby, the water.

It specifically listed times for high tide at different regional locations (such as Cape Charles, Point Lookout, Annapolis, and Baltimore) which could vary by hours.



Abolitionist views

After his adventure in what was to become the nation's new capital, Banneker became more involved with antislavery polemics.

Almanacs often included helpful stories and advice for the reader, so Banneker and his publishers included abolitionist literature in his series of almanacs.

In 1791, along with his completed ephemeris, Banneker sent Secretary of State Thomas Jefferson (principal author of the Declaration of Independence) a polite but direct attack on claims of Black racial inferiority used to defend slavery.



Correspondence with Thomas Jefferson

In collaboration with abolitionists he knew through the Ellicotts, Banneker sent Jefferson an impassioned argument against slavery, in hopes of eliciting a more definitive statement of racial equality from the statesman.

In this letter dated August 19, 1791, he stated:

"Sir, how pitiable is it to reflect, that altho you were so fully convinced of the benevolence of the Father of mankind, and of his equal and impartial distribution of those rights and privileges which he had conferred upon them, that you should at the same time counteract his mercies, in detaining by fraud and violence so numerous a part of my brethren under groaning captivity and cruel oppression, that you should at the Same time be found guilty of that most criminal act, which you professedly detested in others, with respect to your Selves."

[3]

C O P Y
O F A
L E T T E R
F R O M
B E N J A M I N B A N N E K E R, &c.

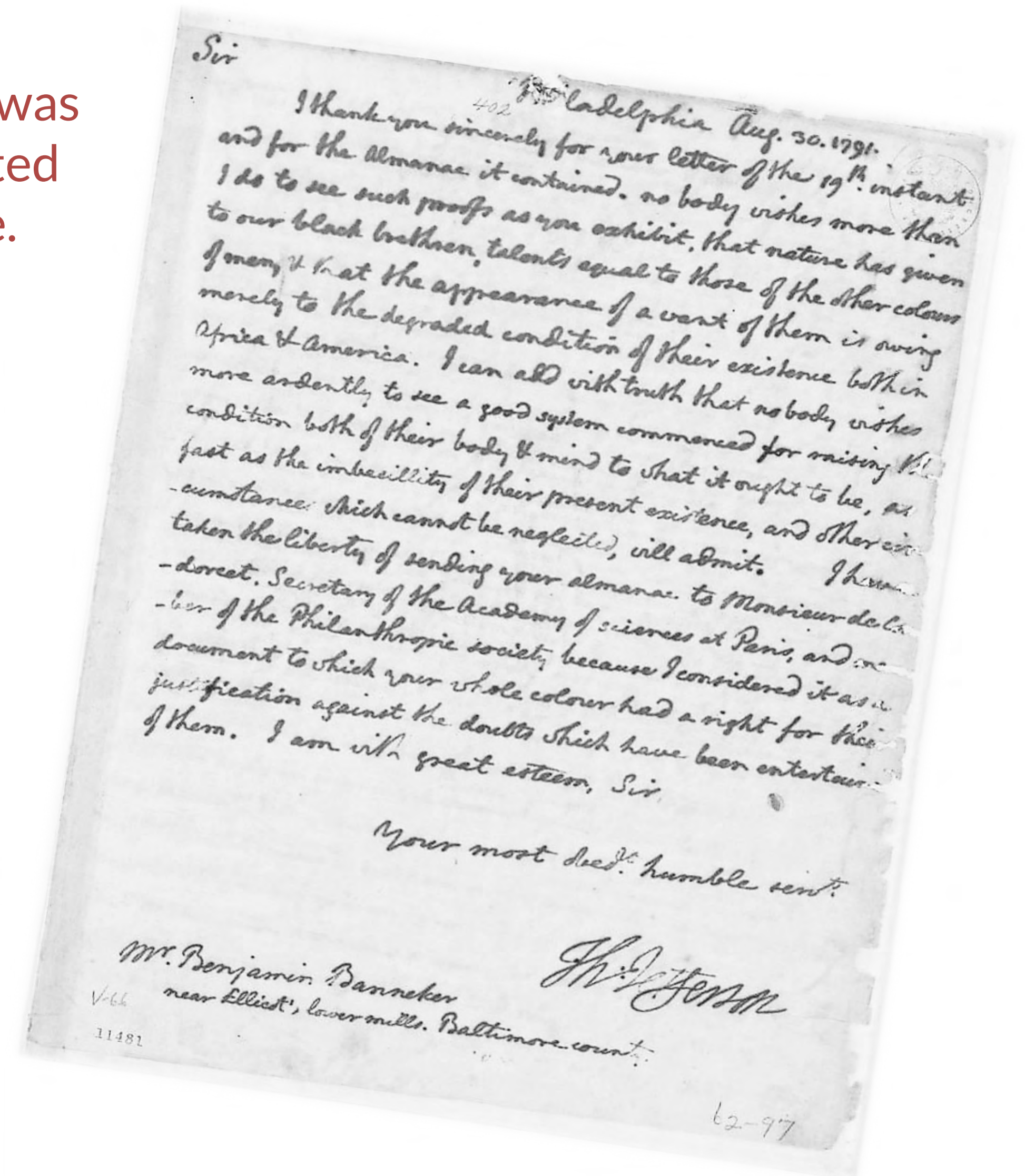
S I R, Maryland, Baltimore County, August 19, 1791.

I AM fully sensible of the greatness of that freedom, which I take with you on the present occasion; a liberty which seemed to me scarcely allowable, when I reflected on that distinguished and dignified station in which you stand, and the almost general prejudice and prepossession, which is so prevalent in the world against those of my complexion.

I suppose it is a truth too well attested to you, to need a proof here, that we are a race of beings, who have long labored under the abuse and censure of the world; that we have long been

Correspondence with Thomas Jefferson

Jefferson responded on August 30, 1791, and it was warm enough that Banneker and friends circulated the exchange in support of the abolitionist cause.



Peaceful contemplation of the stars



For his own part, Banneker preferred a life of tireless inquiry and private contemplation.

In his final years, what Banneker wanted most was the solitude his studies demanded. He had only discovered the wonders of astronomy late in life, and he wanted to pursue his observation of the night sky while he still had his health and the strength to stay awake through the night.

Banneker Laid to Rest



Banneker died just shy of his 75th birthday, and his death was not a shock to those closest to him. He had been in poor health off and on for several years.

“On the morning of October 9, 1806, he took his walk as usual. It was a Sunday. The crisp autumn air was invigorating and he enjoyed bright sunshine as he followed his accustomed route. He met an acquaintance, and they stopped to talk for a short interval. Suddenly, Banneker felt unwell and excused himself. His acquaintance walked with him back to his house and waited until Banneker stretched himself out on his couch in the large room. He never spoke again, and in a short while he was dead.”

Banneker Biographer, Silvio Bedini



Early American Scientist of Repute

As a testament to his reputation, the Federal Gazette wrote the following as part of his obituary:

Benjamin Banneker was “well known in his neighborhood for his quiet and peaceable demeanor, and among scientific men as an astronomer and mathematician”...

“Mr. Banneker is a prominent instance to prove that a descendant of Africa is susceptible of as great mental improvement and deep knowledge into the mysteries of nature as that of any other nation.”

Some historians, like biographer Charles A. Cerami, say that his intellect matched that of Benjamin Franklin.

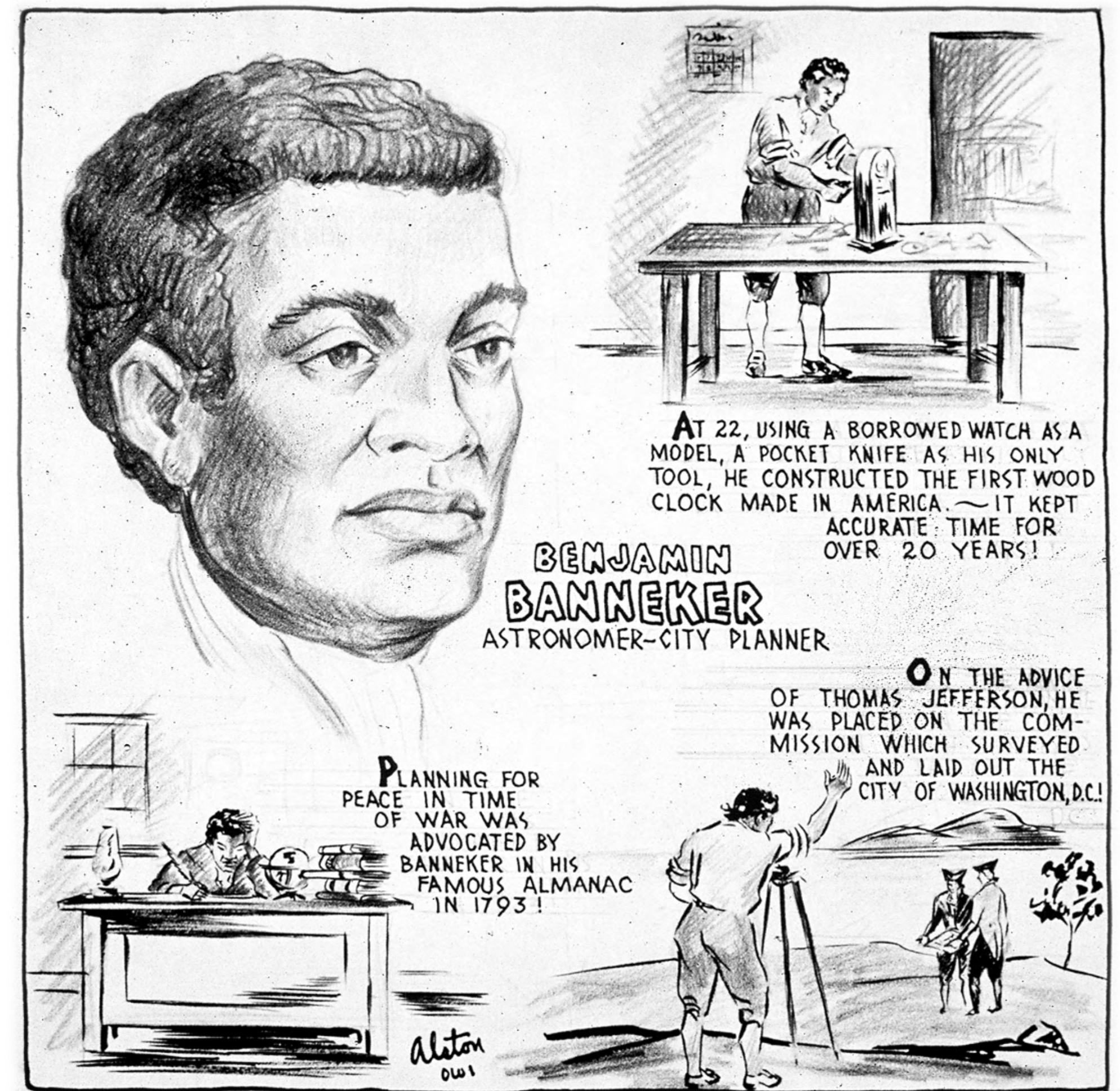


Legacy

As one of few Black men in early American history to achieve distinction, Banneker was celebrated by abolitionists and denigrated by opponents of racial equality, both in his own lifetime and afterwards.

While much of Banneker's life is shrouded in obscurity and legend, historians in the past fifty years have made significant progress in sorting out folklore from factual record, allowing the portrait of a remarkable American polymath to emerge.

This comic illustrates some of the many myths that exist about Banneker, usually the product of exaggerations and embellishments by much later writers.



Legacy

Benjamin Banneker's true legacy lies in the boundary stones that mark the four corners of the original District of Columbia, the almanacs early Americans relied on to guide six years of farming and sailing, his unequivocal defense of Black dignity and freedom, and a passion for scientific inquiry and knowledge that knew no boundary of race or age.

Today, there are many schools named after Banneker, and the Benjamin Banneker Museum and Park is maintained by Baltimore Recreation and Parks.

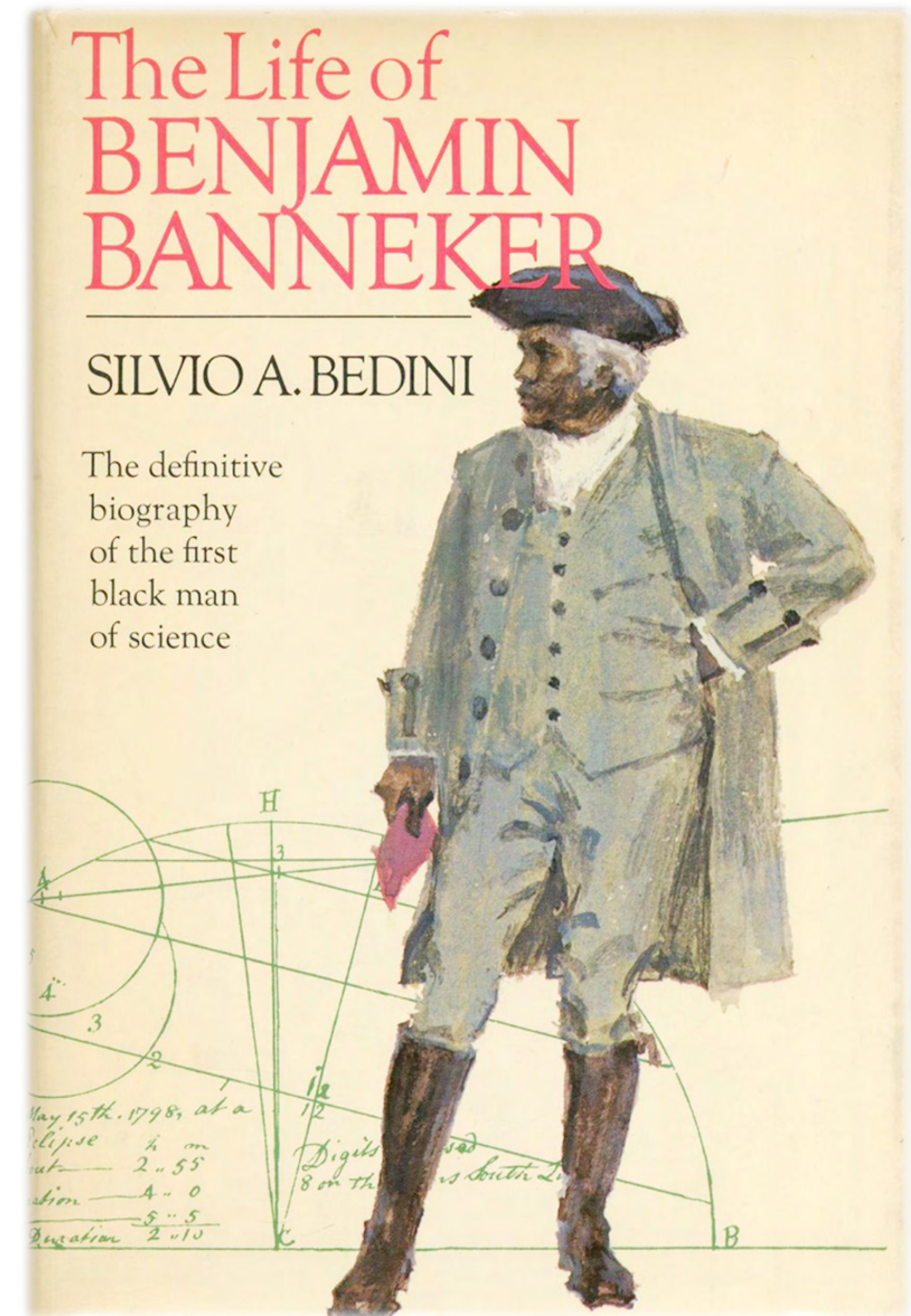




Vocabulary

Farmstead
Surveying
Transit
Astronomy
Satellite
Polemics
Celestial
Navigation
Ephemeris

Eclipse
Perimeter
Almanac
Abolition
Repute
Polymath
Denigrated
Definitive
Unequivocal





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