Hevelius and His Famous Observatory





Johannes Hevelius was an astronomer who, for years, studied the sky without the benefit of a telescope.

Born in 1611, in the town of Danzig—then controlled by Poland, later controlled by Germany and, since the end of WWII, controlled by Poland and known as Gdansk—Hevelius was a legend in his own time.

His vision was so incredible that his contemporaries said he had the "eyes of a lynx."

Like <u>Copernicus</u>, Hevelius believed that the Earth traveled around the Sun. A contemporary of <u>Galileo</u>, who was under house-arrest for a similar opinion, Hevelius believed what his eyes told him.

Making his astronomical work all the more significant, Hevelius was not an astronomer by trade. Like his father, he was a Danzig brewer with a significant business to run. He was admitted to the Brewer's Guild in 1636 (when he was 25 years old).

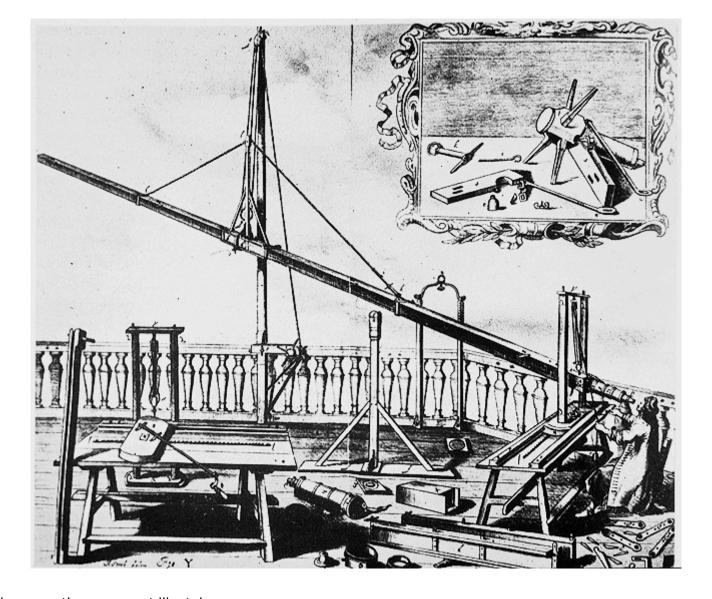
How could he manage a business but still spend so much time building instruments and making astronomical measurements? He had a great deal of help from Katharina, his first wife, who attended to the brewery's needs.

Meanwhile ... to help him study the moon, the planets and the stars ... Hevelius needed an observatory. His was positively huge, extending over the roofs of three houses (for the observing platform) and in another home (for the observatory itself). The image, at the top of the page, depicts his observatory platform (considered the best in the world, for its time).

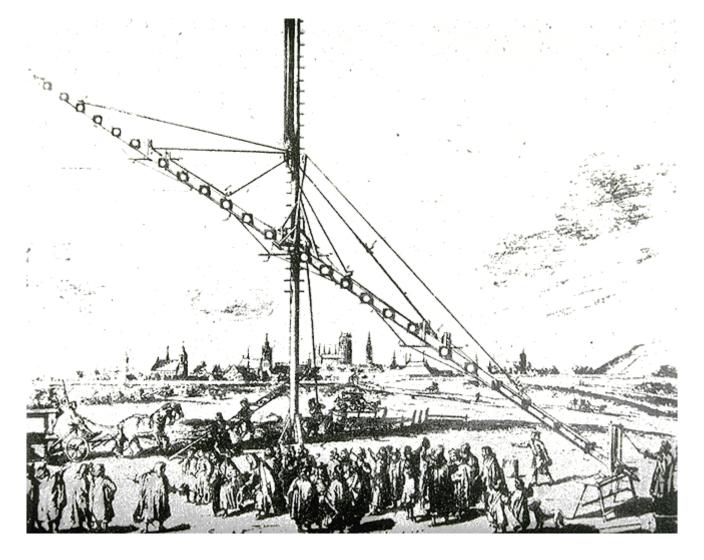
Hevelius made many of his own celestial-gazing instruments, including:

- a quadrant;
- an <u>azimuthal quadrant;</u>
- · a sextant.

He also used some telescopes, but Hevelius was never really happy with the new invention.



Telescopes then were not like telescopes now.



Instead, Hevelius mostly relied on his eyes and his other instruments to measure, and re-measure, objects in the sky.

He was amazingly accurate.

In recent years, experts have compared Hevelius' measurements with measurements made by sophisticated instruments. Hevelius' bare-eyed findings are within twenty-seven seconds of modern findings.

So reliable was his star atlas that it remained in use for nearly a century after his death. Before he published that famous work, however, Hevelius endured an awful tragedy.

A fire—either accidentally or deliberately set by one of his assistants—destroyed Hevelius' famous observatory, his instruments and most of his books and data in September of 1679.

What made anyone think that the fire was deliberately set? D. Capellus, in a letter to Peter Wyche (the British Consul to the Hanseatic Cities), lays-out some facts based on his own observations and investigation:

He [that is, Hevelius] bade his coachman return to the City with the horses before the gates were closed and tell the domestics to guard carefully against fire. The coachman when he had unharnessed and stabled the horses made as if to go to bed, about 9 o'clock, and whether by carelessness as some think, or with intent and of purpose (as the very noble Hevelius himself concludes from the fact that he never rescued from the flames four horses of choice breed and great value) left a burning candle in the stable and set the whole place afire.

The fire being started he passed tiptoe through the front house without saying a single word about it. This took place about half past nine in the evening. After he left, a hall servant noticing an unusual smell of smoke, went hastily to the rear portion of the house where he found the house and stable burning with a steady blaze, the fire fanned by a strong Southerly wind creeping further every moment, catching up everything adjacent before it could be stopped.

So the three front structures of the house quickly began burning. These Hevelius occupied and on these he had erected that famous and incomparable observatory. His Museum indeed was broken open by friendly hands hastening to assist and save what they could from the flames, and the bound books were thrown down from the windows.

Hevelius was 68 years old at the time of the fire. Fortunately, his star-atlas manuscript was not consumed by the flames.

When King Louis XIV (of France) and King Jan Sobieski II (of Poland) heard about the disaster, they provided funds for a new observatory.

In addition to describing and naming many features of Earth's Moon (in *Selenographia*, published in 1647), Hevelius also observed the planets Mercury and Saturn, discovered and mapped star constellations, catalogued 1,564 stars and left behind a stellar reputation which remains intact hundreds of years later.

Seven years or so after the fire had destroyed much of his life's work—but never his spirit—Hevelius got sick. Twelve weeks later, he died on his birthday (January 28, 1687).

In 1690, Hevelius' second wife, Elisabetha—who'd collaborated with her husband in some of his observations—combined his star catalog and atlas into one work called *Prodromus Astronomiae*.

For more information about Hevelius, see the <u>University of St. Andrews' biography</u> about him (and his work). Credits:

Illustration depicting Hevelius' observatory, in Danzing (Gdansk), included in his work "Machina Coelestis," 1673. Online via the Buhl Planetarium and Institute of Popular Science / Buhl Science Center.

Illustrations depicting Hevelius' 60-foot and 140-foot telescopes, located at his observatory in Danzing (Gdansk), included in his work "Machina Coelestis," 1673. Online via the Galileo Project at Rice University.

Hevelius was (and is) also known by the following names:

Jan Heweliusz Johann Hewel Johann Howelcke

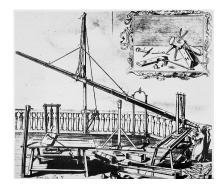
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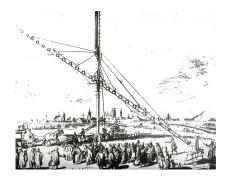
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Hevelius 60 foot telescope

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Galileo - At Odds with Authorities

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David Axelrod

Directed by:

Peter Jones

Narrated by:

Liev Schreiber

Starring:

Simon Callow - Galileo

Laura Nardi - Maria Celeste

John Fraser - the Inquisitor

Alexa Jago - Voice of Maria Celeste

Cornelius Garrett - Voices of the Ambassador and Castelli

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