

Edwin Hubble: Father of Observational Cosmology

By Mary Lynn Bushong

¹ What things interest you? Do you like sports, music, or perhaps learning new things? Edwin Hubble loved sports as a young man, but he went on to become one of the best astronomers in the world.

² Edwin Powell Hubble was born in Marshfield, Missouri, on November 20, 1889. He was very bright but preferred sports to his studies. It wasn't until he was in college that he really concentrated on doing well in his classes.

³ As a child Hubble had enjoyed reading about science and adventure from Jules Verne's books. It was partly because of them that he majored in mathematics and astronomy.

⁴ His father did not want him to continue with the sciences. When he became a Rhodes Scholar and went to Oxford for three years, he studied law to please his dad. On his return, he passed the bar and set up an office, but he wasn't happy practicing law. His passion was astronomy.

⁵ Soon he was studying astronomy at Yerkes Observatory and received his doctorate in 1917. After WWI he took a job at the Mount Wilson Observatory in California.

⁶ Until that time it was believed that the Milky Way covered the whole universe. Hubble was able to prove that the Milky Way was just one of many galaxies, not the only one.

⁷ Hubble also found a way to classify all the different galaxies. While he was doing this, he noticed a phenomenon. All the galaxies were slowly moving away from each other. They did not stay in the same place. The universe was expanding. This gave rise to the Big Bang theory. The constant rate of movement by the galaxies was given a name in 1929, Hubble's Law.

⁸ Hubble's work didn't just affect astronomers. It also affected Albert Einstein. He had already come up with his theory of relativity, but when he applied it to space, it seemed wrong. His theory meant that space could contract or expand, but he thought it was static. He thought that he had made an error in his calculations. Hubble's findings helped him to undo what he called one of his biggest blunders.

⁹ When World War II broke out, Hubble wanted to fight. He was eventually convinced to serve through science. After the war, he returned to the Mount Wilson Observatory. Over the years, Hubble received many honors, such as being elected as an Honorary Fellow of Queen's College, Oxford. There was one honor he really wanted, a Nobel Prize. It wasn't offered for astronomy.

¹⁰ Hubble worked for years trying to get astronomy recognized as part of astrophysics. For years, he was unsuccessful. The rules were finally changed a few months after his death in 1953. Unfortunately, the prize was not awarded posthumously.

¹¹ He was the first to try the new Hale telescope when it was set up at the Mount Palomar Observatory. He worked both there and at Mount Wilson until his death on September 28, 1953.

¹² Though he never achieved the Nobel Prize for astrophysics that he campaigned so hard for, he received a far more visible honor. His name was put on the Hubble space telescope, giving him far more exposure than he would have received otherwise.



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| <p>1. Hubble was interested in science and nothing else.</p> <p><input type="radio"/> A False</p> <p><input type="radio"/> B True</p> | <p>2. What author captured Hubble's imagination for science and adventure?</p> <p><input type="radio"/> A L.M. Montgomery</p> <p><input type="radio"/> B J.K. Rowling</p> <p><input type="radio"/> C Jules Verne</p> <p><input type="radio"/> D H.G. Wells</p> |
| <p>3. Why did Hubble study law at Oxford University?</p> <p>_____</p> <p>_____</p> | <p>4. What did Hubble prefer to do?</p> <p><input type="radio"/> A Astronomy</p> <p><input type="radio"/> B Physics</p> <p><input type="radio"/> C Law</p> <p><input type="radio"/> D Math</p> |
| <p>5. What was Hubble's discovery about the Milky Way?</p> <p>_____</p> <p>_____</p> | <p>6. Hubble discovered that the universe was:</p> <p><input type="radio"/> A Expanding</p> <p><input type="radio"/> B Decreasing</p> <p><input type="radio"/> C Disappearing</p> <p><input type="radio"/> D None of the above</p> |
| <p>7. What honor did Hubble desire but never achieved?</p> <p>_____</p> <p>_____</p> | <p>8. What honor did he get that made him known to even more people?</p> <p>_____</p> <p>_____</p> |

