

The Glass Universe: How the Ladies of the Harvard Observatory Took the Measure of the Stars

Dava Sobel

ISBN 978-0-670-01695-2

When we think of the scientists and astronomers who studied the far reaches of our universe, men like Galileo Galilei and Stephen Hawking often come to mind. But Dava Sobel's latest work tells the untold story of the women who worked at the Harvard Observatory during the late 19th and early 20th centuries, mapping the stars and paving the way for future generations of astronomers and astrophysicists to study the mysteries of our universe.

Sobel begins her narrative with Anna Palmer Draper, the recently widowed Manhattan socialite and benefactor of the National Academy of Sciences who came to Harvard following the death of her husband to pursue her true love of the stars. She worked with Dr. Edward Pickering of the Harvard College Observatory.

Anna Draper established the Henry Draper Memorial, a means by which she could funnel her considerable funds into the observatory's coffers, fueling Pickering's research. Draper's deceased husband had desired to photograph the spectra of the stars, and it became her pet project to see his unfulfilled dream achieved. She donated numerous pieces of equipment to the observatory that would be used by generations of female researchers to come.

One of these researchers started out as Dr. Pickering's maid. Williamina Paton Stevens Fleming went from dusting bookshelves to establishing a system for classifying stars by their spectra. She worked as a female computer for the Harvard Observatory (in the 1800s, men preferred to have a woman do the math—not much had changed 70 years later, when women were doing most of the calculations for the Apollo missions at NASA). Fleming was also a curator of astronomical photographs at Harvard—a highly coveted position.

But Draper and Fleming are only two of the incredible women who contributed to the Harvard Observatory's successful ventures into studying the stars, and it would do these women, and Ms Sobel, a disservice if I were to further discuss them here. If you want more (and you should), read *The Glass Universe*.

Review by Jeanette S. Ferrara, MA