

THE DISCOVERY OF SIRIUS B: A CASE OF STRATEGY OR SERENDIPITY?

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Abstract

In 1862, Alvan Graham Clark discovered the predicted companion of Sirius while helping his father test their new 18 1/2-inch lens in Cambridgeport, Massachusetts. Deborah Warner, in her book, **Alvan Clark & Sons: Artists in Optics**, calls the discovery "a classic case of serendipity" and states that although the companion "had been frequently sought by others," Alvan Graham Clark "was probably unaware of these previous researches." By quoting an undocumented story about the event given in a secondary source, Warner paints a picture of the discovery that raises some practical questions:

"On the evening of 31 January the Clarks...were trying to ascertain how long the light of Sirius was perceptible before the star itself was in view. While Sirius was still behind the corner of a building Alvan Graham noticed the Pup, before it had been in the field for three seconds."

First of all, it is well known that the elder Clark had long tested his new lenses by searching for new and difficult double stars as well as by separating known binaries. He may even have known of Safford's work on the proper motion of Sirius at Harvard College Observatory in 1861. Apparently, Clark himself did not send notice of the discovery directly to any journals or newspapers as he had on past occasions. Rather, he communicated it to someone at Harvard College Observatory. In turn, George Bond, the Director of HCO, confirmed the discovery with the 15-inch telescope and communicated it to Elias Loomis for publication in the **American Journal of Science and Arts**. These facts suggest that there might have been a connection between the elder Clark and someone at Harvard with respect to looking for the companion when it was so well separated from Sirius as it was in 1862.

Secondly, it is also well known that the elder Clark was a perfectionist in figuring his telescope lenses. It was the basis of his receipt of the Rumford Medals from the American Academy of Arts and Sciences in 1866. Also, he had designed and created fine auxilliary apparatus for his telescopes such as micrometers and spectroscopes. Therefore, it seems odd that he would have used something as crude as the corner of his house as an occulting screen for the brilliant Sirius!

Although these questions raise reasonable doubts as to the serendipity of the discovery, they cannot serve a proof for the elder Clark's actually having a strategy. In looking for such evidence, we must first turn to Warner's own sources for a re-reading of the accounts, and then to other sources Warner does not cite. Therefore, this presentation will draw from papers in various local archives.

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REFERENCE

Warner, Deborah. 1968, **Alvan Clark & Sons: Artists in Optics**, Smithsonian Institution Press, Washington, DC, pp. 30-32.