

# Biology Seminar



12:30 - 1:30 pm  
Friday, October 10, 2025  
BGS 0165



**Vassiliki Betty Smocovitis**

Professor

Department of Biology & History  
University of Florida

## **Defining Life: Carl Sagan, The Encyclopedia Britannica, and Biology in the Mid-Twentieth Century**

This paper explores the attempt to come to terms with the definition of “life” in the mid-twentieth century by focusing on one particularly important attempt to define it for the then authorizing source, the *Encyclopedia Britannica*. The completed entry, written by Carl Sagan, the well-known celebrity scientist, remained one of the most popular resources on “life” for an international audience of readers in the last half of the twentieth century. Indeed, it continued to be published until well into the next century when it finally underwent revision by his ex-wife, Lynn Margulis, herself a noted biologist. The entry was the source of much pride for Sagan who viewed it as a crowning achievement at that point in his career. This paper explores the contents of the entry, and Sagan’s rather unique, and synthetic perspective in formulating it, in light of critical developments in the biological sciences in the 1940s and the 1950s that included the “Modern” or evolutionary synthesis, the celebrated Miller-Urey experiment on the origins of life, and the articulation of the structure of DNA. How all these developments played out in Sagan’s entry, but also in his stellar career, and in the context of emerging disciplines like “exobiology,” its clash with organismal and evolutionary biology in the context of Cold War space exploration, will be discussed in the paper.

