Chapter 7
Wrestling with Mosasaurs: Results of the Sternberg Museum of Natural History–Forsyth Library Fossil Digitization Pilot Project

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ABSTRACT

The purpose of the Sternberg Museum–Forsyth Library Fossil Digitization Pilot Project was to determine the feasibility of conducting a large-scale fossil digitization program at Fort Hays State University, Hays, Kansas. Conducted in early 2011, the pilot examined such aspects as fossil digitization techniques, metadata development and best practices, scope and timelines, and overall digitization goals. This chapter focuses on the digitization landscape of the natural sciences, including an overview of major fossil digitization projects and analyses of issues related to these projects. Conclusions from the Sternberg–Forsyth pilot are also recounted and discussed. Also included is an appendix outlining costs and time needed for the recommended small-scale digitization project that will begin in late 2011 or early 2012.

INTRODUCTION

Between January 27th, 2011, and March 5th, 2011, Forsyth Library and the Sternberg Museum of Natural History, both operating within Fort Hays State University, participated in a pilot project to determine the feasibility of digitizing a paleontology fossil collection. This chapter aims to discuss the results and conclusions of this collaboration between a nationally-recognized natural history museum and a medium-sized academic library serving a state comprehensive university in rural Kansas.

Sternberg Museum of Natural History

The Sternberg Museum of Natural History, first founded as an academic support facility in 1915, contains millions of specimens ranging from the Paleozoic to Cenozoic eras, including world-
class specimens of fossils from the Cretaceous period, and plants and animals from more modern periods. It is most well known for its specimen, *Gillicus* within a *Xyphactinus*, the “fish within a fish,” found by Dr. George Sternberg, and its world-class collection of Vertebrate Paleontology specimens, including world-renowned specimens of *Pteranodons*. The museum’s holdings are stored in various rooms dedicated to unique types of collections, including the wet collections (specimens held in liquid, jars), dry collections, and taxidermy collections. Additionally, the museum contains artifacts ranging from antique furniture, to old weapons, to images from other countries such as Borneo and Malaysia. Many of these miscellaneous collections are in the process of being moved to different locations or transferred to different organizations, including the Forsyth Library Archives and Special Collections (Sternberg, 2011).

**Forsyth Library**

The partnership to create digital images of the Vertebrate Paleontology exists as part of the ongoing collaborative efforts that have occurred between the library and the museum. Currently the Forsyth Library Archives contains a number of significant artifacts related to the founder of the Sternberg Museum. These holdings include a series of 8 personal photo albums created by Dr. Sternberg. They are significant because these images are from his original archaeological digs, which started in the 1910s and ran through to the 1950s, serving as both a primary source for Sternberg’s paleontological discoveries and as a source for the history of Fort Hays State University. Additionally, the archives hold a series of glass-plate negatives and film negatives taken by Sternberg, some of which are found within the photo albums. These holdings represent some of the most sought-after materials in the archives and account for many of the research requests from patrons. The Sternberg Photo Albums, in particular, are a major priority item for digitization given their fragility and high patron demand. Both the albums and the negatives are in the process of being digitized and displayed online (FHSU, 2011).

**Project Proposal and Time Frame**

Given the overlap in collections housed at FHSU’s Sternberg Museum and Forsyth Library, and the constant cooperation and collaboration between the two organizations, it was a natural progression to begin investigating the possibility of a digitization partnership. The project proposed by the Sternberg Museum was to begin a digitization partnership in order to digitize the vast collection of fossils from the Vertebrate Paleontology (VP) Room, a collection estimated to be at least 1 million specimens. From the discussions, it was determined that the Sternberg Museum was interested in digitizing the entirety of the fossils in the VP collection with the aim to give scholars a comprehensive picture of their holdings. It is envisioned as a service for scholars to more efficiently use the fossil holdings, who otherwise might not be able to visit Hays, Kansas.

From February – March 2010 preliminary discussions were initiated about the possibility of a partnership between Forsyth Library and Sternberg Museum, with both sides expressing interest in exploring a joint project. A preliminary 8-week pilot schedule was drawn up to begin June 2010. However, the start was delayed until January 2011 by several factors:

- Forsyth Library Digital Collections data storage backup was projected to reach full capacity by August 2010. Though sufficient space existed for current projects, adding significant amounts of data from new projects was not possible. A Network Area Storage (NAS) device was requested June, 2010, but not ordered until September, 2010. It was received by FHSU Center for Technology and Computing (CTC) in October and fully functional by mid-November 2010.