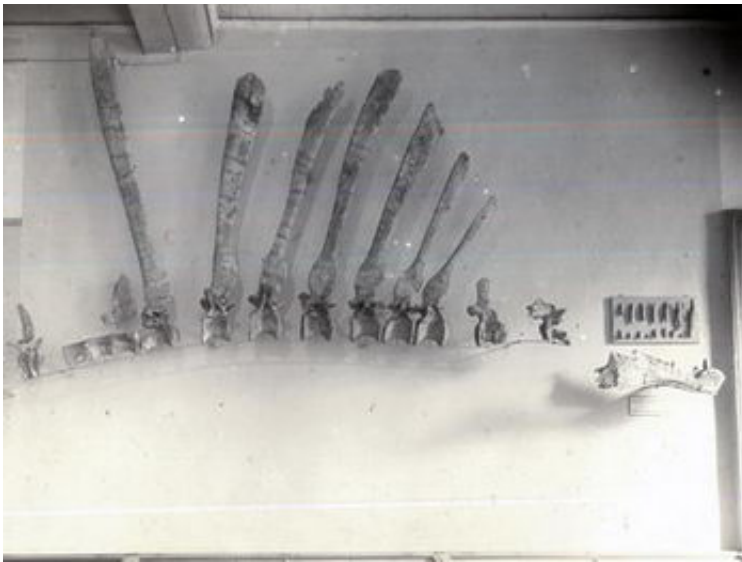


'Picture positive': Lost photos confirm fossil find

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This photograph of Spinosaurus dinosaur bones that Josh Smith found in a German museum is the only photographic proof of German researcher Ernst Stromer's discovery of Spinosaurus, a dinosaur similar in size to the famed Tyrannosaurus rex. All but Stromer's drawings of his find were lost when the Allies bombed out the Munich museum where the materials were held. The photo is significantly historically but also as a comparison of Stromer's drawing for a better understanding of the species' skeleton.

The researcher who discovered *Paralititan stromeri*, one of the most massive animals ever to walk the Earth, now is "picture-positive" about another dinosaur fossil find by a famous German researcher, Ernst

Stromer.

In the early 20th century, Stromer discovered four new species of dinosaurs, including the predator *Spinosaurus*, similar in size to the famed *Tyrannosaurus rex*. Stromer returned to Munich with the fossils, maps and details of his discovery, but all was lost in 1944 when the Allies bombed out the museum where the materials were held.

Enter Josh Smith, Ph.D., assistant professor of earth and planetary sciences in Arts & Sciences at Washington University in St. Louis. Writing in a recent issue of the *Journal of Paleontology*, Smith reports the rediscovery of two photographs of the holotype of *Spinosaurus aegyptiacus* as it was repositied in the Palaontologische Staatssammlung Munchen prior to 1944, and later presumably lost in the Allied bombing.

In June, 2000, while researching in Germany, Smith happened upon the photographs in the Palaontologische archives of the Museum, after Ernst Stromer's son, Wolfgang Stromer, donated them to the museum in 1995.

"These are, to our knowledge, the only surviving photographs of this, the one irrefutable specimen of *S. aegyptiacus*, which, prior to the initial print releases, has only been represented by Stromer's drawings," said Smith. "This is a significant find from the perspective of the history of paleontology."

Aside from their historical significance, Smith said that the images are important because they permit a direct comparison of several of Stromer's 1915 illustrations with actual photographs of *Spinosaurus aegyptiacus*, providing new insight into the skeleton.

"It's great to be able to determine how closely these illustrations correspond to the actual anatomy of the dinosaur as reproduced by the photographs," Smith said. "This has implications for the use of published

drawings as sources of systematic information."

Serendipity in the desert

It was Stromer who indirectly led to Smith's discovery in 1999. Smith and his wife, Jennifer R. Smith, Ph.D., Washington University assistant professor of earth and planetary sciences, then both graduate students at the University of Pennsylvania, were retracing Stromer's steps on a trip to Egypt's Bahariya Oasis in the Sahara in 1999. Smith and his collaborators not only uncovered Stromer's original site, but they also discovered an entirely new genus of dinosaur, *Paralititan stromeri*, the second most massive dinosaur ever to walk the Earth.

A year earlier, Josh Smith and fellow University of Pennsylvania geology graduate student Matt Lamanna hatched a scheme to see if they could come up with a Ph.D. project for Lamanna, who knew that nobody was working in the area that Stromer had found so rich earlier in the century, and the two tried to find a way to get to Egypt. Jennifer Smith was going to Egypt on another project in January 1999 and asked her then boyfriend Josh Smith if he'd like to hire on as a field assistant. He accepted on the condition that he'd be allowed some time to research Stromer's general area. In just two days of searching, Smith came up with some dinosaur bone fragments to confirm that he had found the area and that showed there very likely could be more to be discovered.

Eventually Smith, through a close friend, Scott Winters, convinced a Los Angeles film company to fund the 2000 expedition as long as Smith's team would agree to be the subjects of their documentary. It was on this trip that Josh Smith made the big discovery.

Smith and the team published their results in the June 1, 2001, issue of *Science* and immediately became famous, with stories appearing in the New York Times, USA Today, Newsweek, Scientific American and a

host of other publications and TV interviews that went worldwide.

Josh Smith co-authored *The Lost Dinosaurs of Egypt* (Random House), a book about his remarkable research expedition, and published in the fall of 2003. The documentary originally aired Oct. 8, 2003, when A&E Network showed a two-hour documentary of the book's contents.

Source: Washington University in St. Louis, By Tony Fitzpatrick

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