

# SPINOSAURUS

REVEALED



## Contact

Nena Connelly-Smoleniec  
[nconnelly@uchicago.edu](mailto:nconnelly@uchicago.edu)





## Contents

Exhibit Overview .....	3
New Species .....	4
Exhibit Narrative .....	5-10
Available Components & Requirements ..	11
Example Floor Plan .....	12
Paul Sereno & the Fossil Lab .....	13
Exhibit Extensions .....	13



JMdeLLobet\_MCNB

The exhibit centerpiece is the 45-foot long paddling skeleton of *Spinosaurus* pursuing a flesh model of the sawfish *Onchopristis*.

Cover mural: *Spinosaurus* tangles with a sawfish some 90 million years ago.





## Exhibit Overview

***Spinosaurus Revealed*** tells the dramatic story behind the largest and most fascinating predatory dinosaur ever discovered. The exhibit's special surprise is the first look at the amazing tall-crested skull of a new species of *Spinosaurus* just discovered by Paul Sereno and team in 2022.

Scene settings and film footage take visitors back to the discovery of the first bones in Egypt a century ago, the site of their destruction in World War II in Germany, and the remarkable rediscovery of a new specimen in Morocco. Visitors learn how *Spinosaurus* became the first “digital dinosaur,” reconstructed from CT scans and digital machining and printing to create and animate its 45-foot-long skeleton.

### Highlights

- **Skull of a new tall-crested *Spinosaurus* species**
- **Scene settings** from Germany, Morocco, and Chicago
- **Paddling *Spinosaurus* skeleton**, the most amazing shoreline predator that ever evolved
- **Original fossils** of *Spinosaurus* and other African predators
- **Skulls, skeletons & flesh models** of Africa's land, water and airborne predators
- **Original digitally-sculpted skull reconstruction** of *Spinosaurus*
- **Expedition footage** from the Sahara



Dani Navarro

The *Spinosaurus* story unfolds on three continents across more than a century of time —culminating in the daring expeditions and fine lab work of Paul Sereno and the Fossil Lab.



# WORLD PREMIERE

**New *Spinosaurus* discovered!**  
**First new species in over a century.**  
**Dramatic skull unveiled.**







## Exhibit Narrative

### Egyptian Finds Destroyed

Scene settings take visitors back to the site of discovery in Egypt's Western Desert in 1915, the study of German paleontologist Ernst Stromer, and the museum display in Munich on the fateful day the bones were destroyed.



Erin Fitzgerald

Scene setting of a study in the family castle of German paleontologist Ernst Stromer, who named and described *Spinosaurus*.



JMdeLlobet\_MCNB

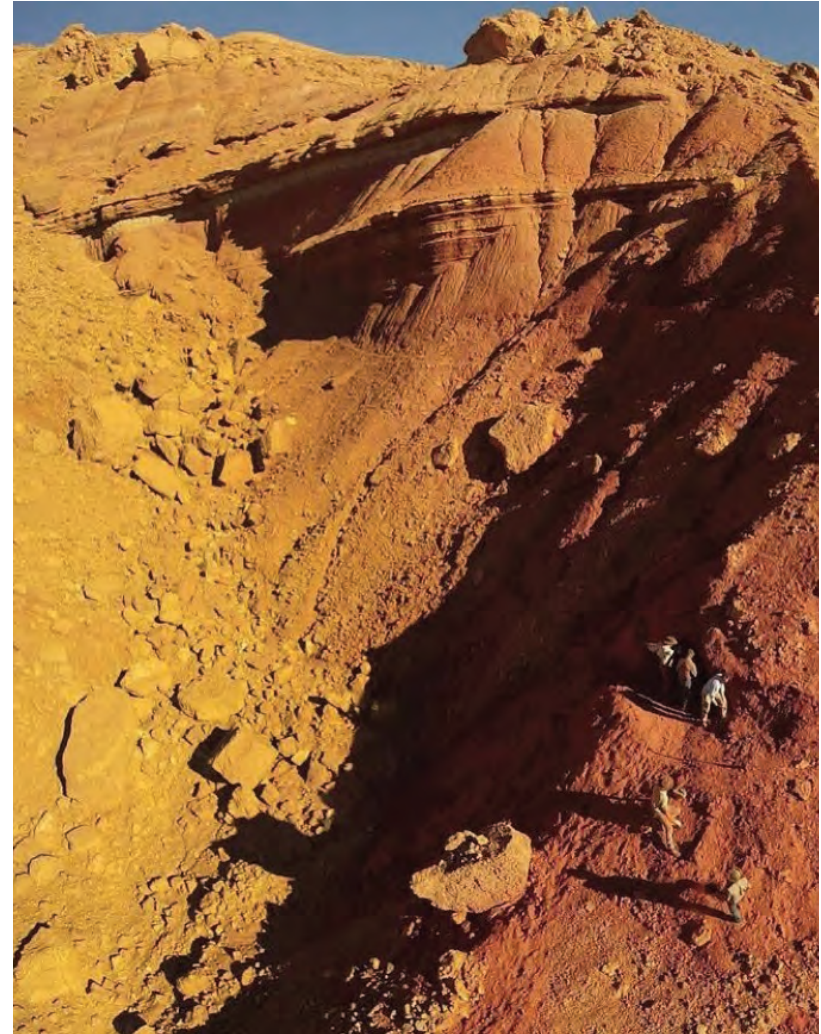
Scene setting in a Munich museum in 1944 when all bones of *Spinosaurus* were destroyed along with the museum during a bombing raid in WWII.





## Rediscovery in Morocco a Century Later

Paul Sereno chips away at rock on the side of a cliff in Morocco where a shepherd years before had discovered bones of a second skeleton of *Spinosaurus*. Bone pieces and teeth of the giant predator were collected.







## Creating a Digital Dinosaur

Using CT scans of the new fossil bones from Morocco and drawings and photographs of the bones from Egypt, Paul Sereno and the Fossil Lab created a 3D digital model of *Spinosaurus*.

The 3D digital wizardry of Sereno's Fossil Lab includes the first skull reconstruction of the mega-predator machined from blocks of hard foam.



See the machine-carved skull of *Spinosaurus* with a touchable piece.



Digital paleontology generates virtual skeletons and flesh models that add accuracy when brought to life in movies.

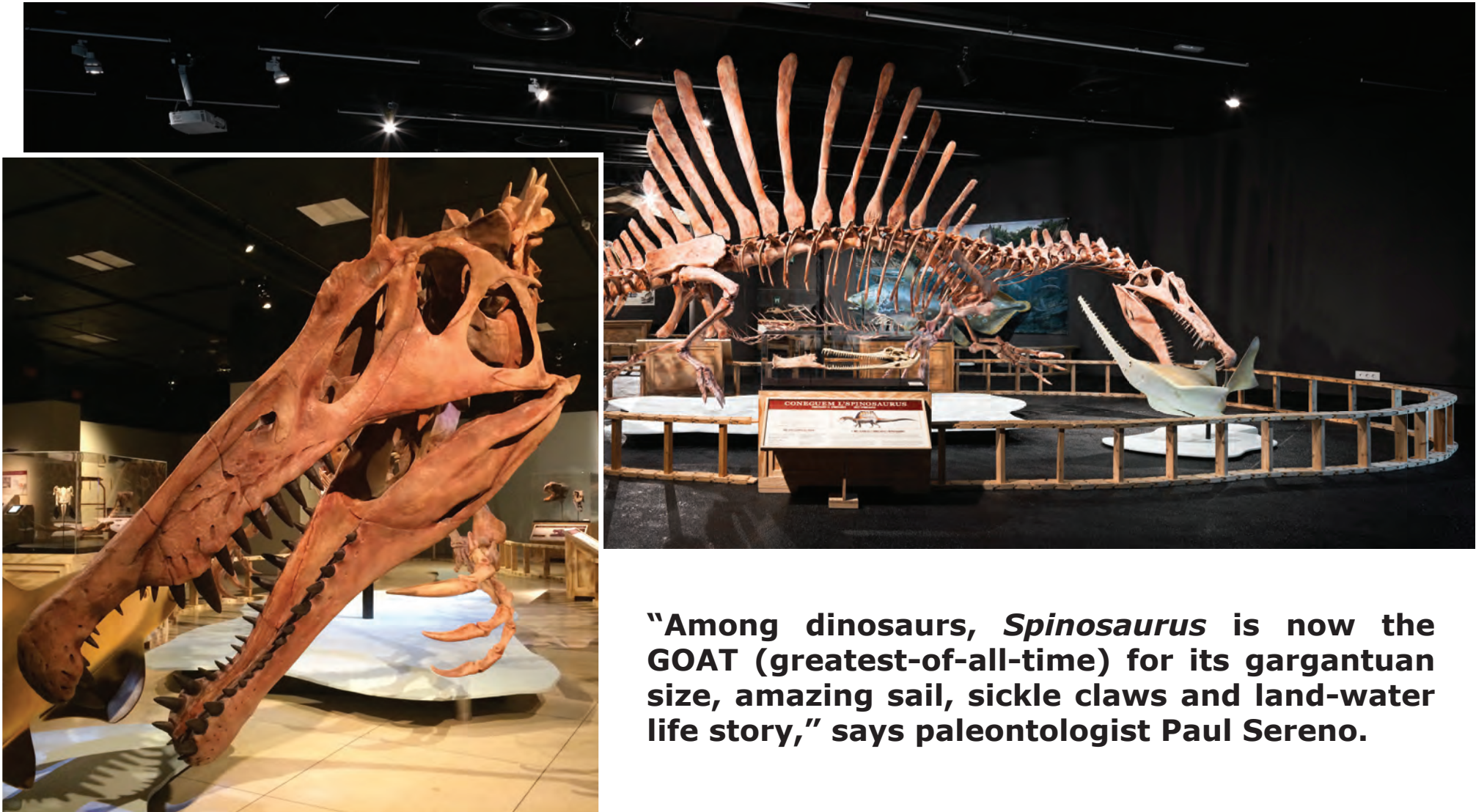


Mike Hettwer





## The Most Captivating Dinosaur



**"Among dinosaurs, *Spinosaurus* is now the GOAT (greatest-of-all-time) for its gargantuan size, amazing sail, sickle claws and land-water life story," says paleontologist Paul Sereno.**

Fish-eating is written all over the crocodile-like skull of *Spinosaurus*.





## Meat-Eating Menagerie

Come face-to-face with *Spinosaurus*' competitors —the greatest array of predators ever found prowling the same landscape. Skeletal mounts, flesh renderings and real fossils bring to life *Rugops* ("rough face"), *Deltadromeus* ("delta runner") and *Carcharodontosaurus* ("shark-toothed reptile").



Wander among beasts that capture the imagination in skeletal mounts, flesh models, real fossils and murals.



# SPINOSAURUS REVEALED



## The World of *Spinosaurus*

Step back 90 million years in time to explore *Spinosaurus*' world with giant predatory fish and soaring scavengers. Giants in their own right, many of the animals living alongside *Spinosaurus* prowled the waterways and skies for prey, like the 12-foot long coelacanth *Mawsonia* and beaked pterosaur *Alanqa* with an estimated wingspan of 20 feet.



Paul Sereno

Life-sized flesh models of the giant coelacanth *Mawsonia* and pterosaur *Alanqa* are among the most lifelike ever created.



Paul Sereno

African predatory dinosaurs are unusual, some with huge skulls bearing dagger-shaped teeth and others with small skulls for gnawing on carrion.





## Available Components & Requirements

### Major Components

#### Scene Settings

19th century Germany  
Cave discovery site in Morocco  
Chicago & Milan Fossil Labs

#### Real Fossils

*Spinosaurus* jaw and hand bones  
*Carcharodontosaurus* jaw  
*Rugops* jaw  
Other teeth, jaw pieces, vertebrae & fossil wood  
*Alanqa* jaws

#### Mounted Dinosaur Skeletons (cast)

*Spinosaurus*  
*Deltadromeus*

#### Skull & Flesh Heads (cast)

new *Spinosaurus* species skull  
*Carcharodontosaurus*, *Rugops* & *Alanqa* jaws  
*Deltadromeus*  
*Laganosuchus* (crocodile)  
*Elosuchus* (crocodile)  
*Gavialis* (gharial)

#### Flesh Models

*Mawsonia* (coelacanth)  
*Alanqa* (pterosaur)

#### *Spinosaurus* Dig Site & Rubbing Station

### Basic Requirements

#### Exhibit Space

5,000-10,000 sq. ft. exhibit (flexible)

#### Maximum Height

15 feet

#### Maximum Crate Size

125" x 49" x 46" (11' x 4' x 4')

#### Power Supply

7 110-volt outlets (monitors/projectors)

#### Projectors

2 ceiling-mounted projectors (for wall projection)

#### Installation

Fork & genie lifts, ladders

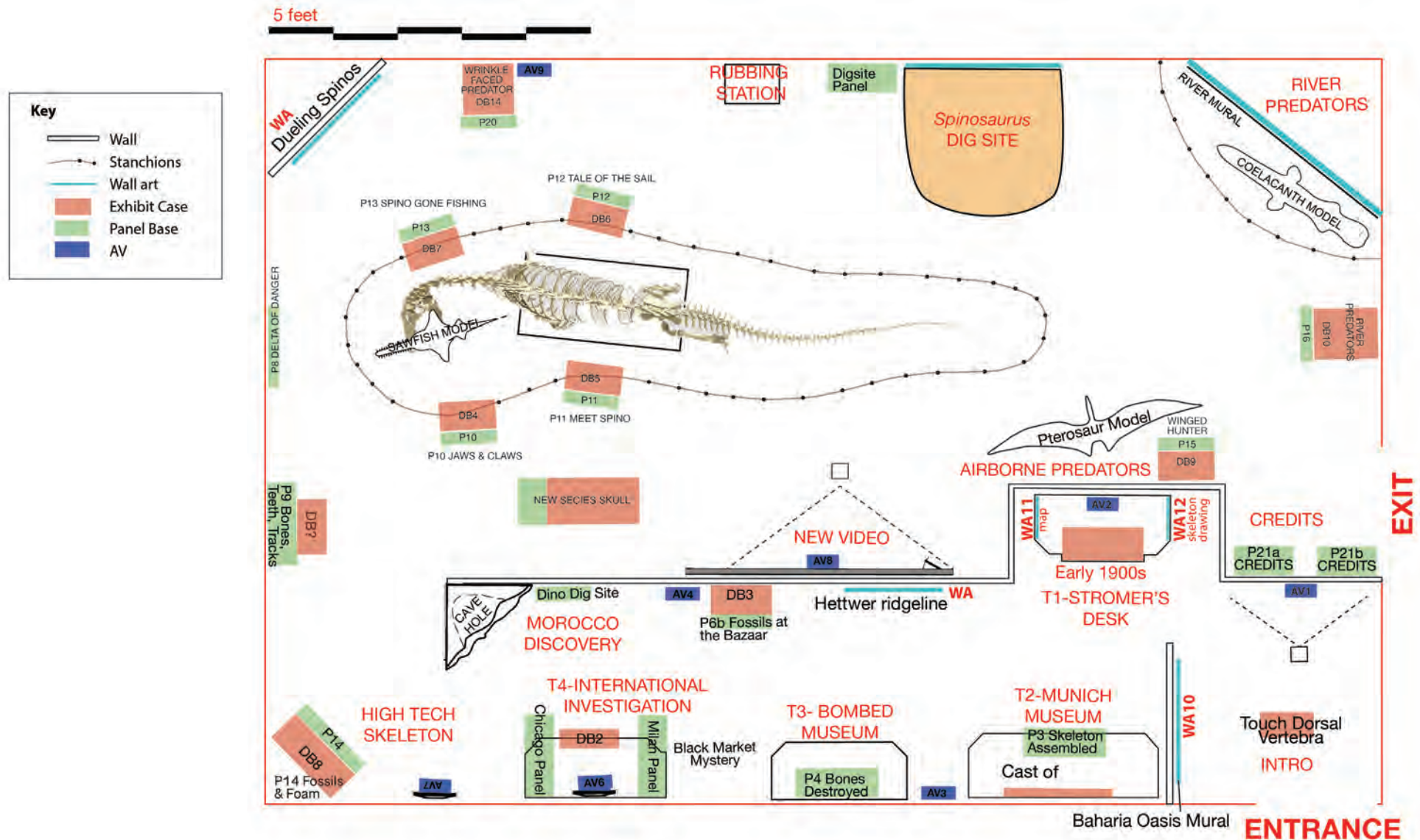
#### Walls, Stanchions, Ceiling Mount (see example floor plan)

~150 feet of stanchions  
~100 feet temporary walls  
1 ceiling mount (hanging pterosaur flesh model)





## Example Exhibit Floor Plan



Example 5,000 sq. ft (85' x 60') exhibition floor plan. Additional exhibition components offer expansion to 7,500 and 10,000 sq. ft.



# SPINOSAURUS REVEALED



## About Paul Sereno & the Fossil Lab

A *University of Chicago* Professor and *National Geographic* Explorer, Paul Sereno's field exploits began in the Andes in Argentina, where he discovered the earliest dinosaurs. Other expeditions have explored the Sahara and Gobi Deserts, India's Thar Desert and remote valleys in Tibet. From Africa, he has unveiled spectacular crocodiles and dinosaurs, including the 45-foot long *Spinosaurus* and 40-foot long SuperCroc. Featured in *National Geographic* magazine and many documentaries, Sereno was named "Teacher of the Year" by the *Chicago Tribune*, won the University Medal from his alma mater Columbia University, and received the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring from President Obama.

The *Fossil Lab's* exhibit program directly supports its renowned research enterprise. Exhibits are designed to facilitate teaching and learning at all ages with accessible, cutting-edge content that offers authentic fossils, major historical events and expeditions, and real people.

## Exhibit Extensions



### Add-on Options

- Speaking event (Paul Sereno)
- Films (related documentaries)
- Mechanical *Suchomimus* skeleton

### Themed Merchandise

- Puzzles
- Casts
- Graphics for t-shirts, mugs, etc.



### Other Exhibits

