

BIZARRE HEADGEAR



Ceratopsians and the Evolution of Extraordinary Skulls



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Evolution of
Extraordinary Skulls**

The exhibit Bizarre Headgear presents evolution to the extreme. 12 foot antlers and billboard sized heads are just some of the dramatic examples of bizarre headgear on display. See the amazing ways evolution has equipped the prehistoric animal world for combat and courtship. From the evolution of giant horned dinosaurs to their outrageous mammalian counterparts, this exhibit traces the evolution of bizarre head structures throughout time.



THEMES

- Origins and evolution of horned dinosaurs
- Bizarre headgear in other dinosaurs & birds
- The rise of horns and antlers in mammals
- Crests and frills in the animal kingdom
- Anatomy of bizarre head structures
- Bizarre headgear in courtship and combat
- Human adaptation of bizarre headgear

SPECIFICATIONS

- 2,000-10,000 sq. ft.
- 10 foot minimum ceiling height recommended

PRICING & DURATION

Affordable rates beginning at \$35k for 2,000 sqf and \$175k for 10,000 sqf. transportation included. The standard exhibit lease is 3 months. Longer or shorter periods can be arranged according to the requirements of the exhibition venue. Detailed lease fees available on request.

TO BE PROVIDED BY THE HOSTING VENUE

- Lights, and barriers.
- Single-phase electrical supply.
- Translation of text and production of text panels and graphics if necessary.
- Equipment required for access, installation and dismantling.
- Skilled support staff to assist with installation and dismantling.
- Storage facilities for transport crates.
- Promotion and publicity.
- Staffing during exhibition run.

CERATOPSAINS

The first ceratopsians were small. Some, like *Psittacosaurus*, were completely without frills. From these early ceratopsians, behemoths like *Torosaurus* arose. Evolution pushed ceratopsians to ever larger and more elaborate frills. Like *Protoceratops* on a larger scale, later ceratopsians were walking billboards advertising suitability as mates or intimidating rivals and predators by their sheer size.



OTHER DINOSAURS & BIRDS

Dinosaurs were incredibly diverse, which is reflected in their headgear. While Ceratopsians may win the prize for the largest headgear, other dinosaur groups used their head features in a variety of ways. In addition to mating displays, Hadrosaurs may have used crests to produce low frequency calls and theropods to regulate body temperature. The uses of dinosaur headgear may have been as numerous as their many incredible forms.



MAMMALS

The frills, crests, and horns of dinosaurs proved successful for millions of years, and mammal headgear became every bit as extreme.

When comparing antlers and tusks to Ceratopsian skulls, the head forms are noticeably different, but they probably served the same primary functions. Looking at the large horned and antlered skulls it is easy to imagine the ability of mammals to fill the same evolutionary roles as ceratopsians.





Why do some heads develop strange forms? Mostly, it is related to mating. Other parts of the body can evolve to be elaborate, think of a peacock's tail, but the head is the most noticeable part of the body.

While bizarre features have many uses, tusks can dig, and antlers can defend, the main reason for frills, crests, horns, and tusks is the attraction of females or the elimination of rivals. Attractiveness to the opposite sex and being able to intimidate young rivals with large headgear are the keys to mating success.



Specimen & Item List

for 10,000 square feet

Ceratopsians	<ul style="list-style-type: none">• Adult Protoceratops skeleton cast• Juvenile Protoceratops skeleton cast• Torosaurus skeleton cast• Utahceratops skeleton cast• Juvenile Utahceratops skeleton cast• Psittacosaurus skeleton cast• Zuniceratops skeleton cast• Diabloceratops skull or skeleton cast• Pentaceratops skull cast• Nasutoceratops skull cast• Eotriceratops skull cast• Coahuilaceratops skull cast• Kosmoceratops skull or skeleton cast• Archeoceratops skull cast• Lioceratops skull cast• Auroraceratops skull cast	Mammals Tusks & Teeth	<ul style="list-style-type: none">• Tjapahara skull cast• Tropeognathus skull cast• Cuverionus skull cast• Mammoth skull or skeleton cast• Modern Hippopotamus skull cast• Ice age walrus skull cast• Platybelodon skull cast• Chiloterium skull cast• Modern Warthog skull cast• Modern Vampire deer skull• Modern Muntjac skull• Modern Roe deer skull• Smilodon Populator skull cast• Modern Elephant skull cast• Modern Narwhal skull cast• Mastodon Skull cast
Life Sculptures	<ul style="list-style-type: none">• Torosaurus 1: 15 scale• Pachyrhinosaurus 1:15 scale• Styraeosaurus 1:10 scale• Einosaurus 1:10 scale• Psittacosaurus 1:1 scale• Utahceratops skull anotomical model	Mammals Antlers	<ul style="list-style-type: none">• Irish Elk Skull cast• Cervalces Skeleton cast• Sinomegoceros skull cast• Synthetoceras skull cast
Other Dinosaurs	<ul style="list-style-type: none">• Corythosaurus (Duckbill) skull cast• Velafrons (Duckbill) skull cast• Parasaurolophus (Duckbill) skull cast• Pachycephalosaurus skull & Dome• Saurolophus (Duckbill) skull cast• Ceratosaurus skull cast• Dilophosaurus skull cast• Prenocephale skull cast• Minotaurasaurus skull cast• Oviraptor skull & neck cast• Anzu (oviraptor) skull cast	Mammals Horns	<ul style="list-style-type: none">• Bison Latifrons skull cast• Bison Priscus skull cast• Modern Bison skull• 14 modern African bovid skulls
		Other Horns & Ossicones	<ul style="list-style-type: none">• Modern Rhinoceros skull cast• Pleistocene woolly rhino skull cast• Modern Giraffe skull & neck• Sivatherium skull cast• Brontotherium skull cast
Life Sculptures	<ul style="list-style-type: none">• Minotaurasaurus head• Ceratosaurus head• Oviraptor head & neck	Other Mammals	<ul style="list-style-type: none">• Archeotherium skull cast• Megachoerus skull cast
Early Bizarre Headgear	<ul style="list-style-type: none">• Estemmenosuchus skull cast• 2 Dicynodont skull casts	Life Sculptures	<ul style="list-style-type: none">• Brontotherium head• Archeotherium head
Life Sculptures	<ul style="list-style-type: none">• Estemmenosuchus head	Featured Artists	<ul style="list-style-type: none">• Karen Carr• Shane Foulkes• James Kuether• Dan Larusso• Victor Lyshek• Gary Staab• Elisa Uribe• Greg Wenzel• Dennis Wilson
Birds	<ul style="list-style-type: none">• 7 Modern Hornbill skull casts• 1 Modern Cassowarie skull cast		
Pterosaurs	<ul style="list-style-type: none">• Nyctosaurus skull cast• Tupuxuara skull cast• Pteranodon skull cast		



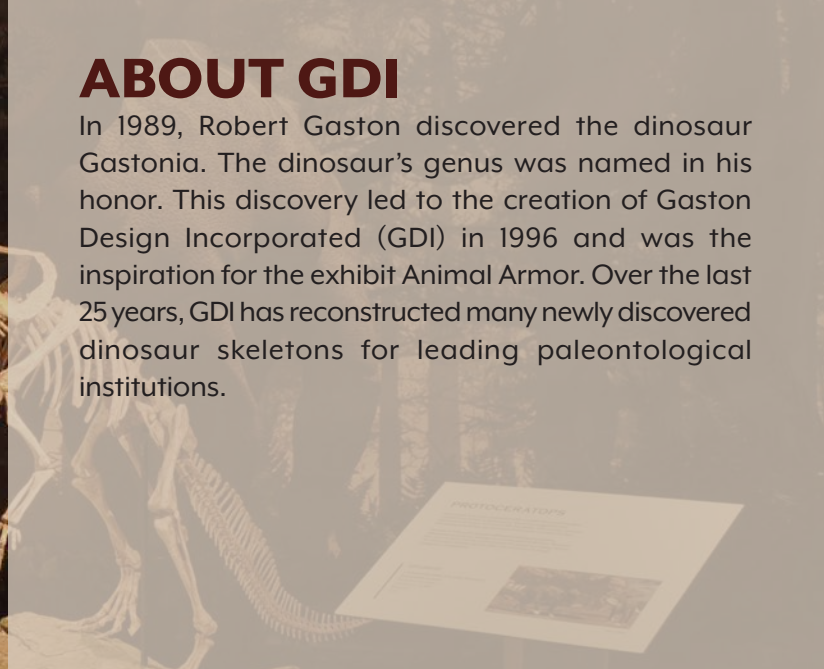
"THE QUALITY AND SCIENTIFIC ACCURACY OF THE SPECIMENS (E.G., REPLICA SKELETONS, MODELS, ETC.) IN THIS EXHIBITION IS ABSOLUTELY SECOND-TO-NONE. GASTON DESIGN'S PRODUCTIONS ARE SO AUTHENTIC-LOOKING, MOST PEOPLE WON'T REALIZE THEY'RE LOOKING AT REPLICAS RATHER THAN ORIGINAL FOSSILS. MOREOVER, MANY OF THE CREATURES IN THE EXHIBITION—INCLUDING SEVERAL OF THE DINOSAURS—ARE VERY RECENTLY DISCOVERED AND AS SUCH HAVE RARELY, IF EVER, BEEN SHOWN TO THE PUBLIC BEFORE."

—MATTHEW C. LAMANNA, LEAD PALEONTOLOGIST CARNEGIE MUSEUM OF NATURAL HISTORY ON THE GDI EXHIBIT ANIMAL ARMOR



ABOUT GDI

In 1989, Robert Gaston discovered the dinosaur Gastonia. The dinosaur's genus was named in his honor. This discovery led to the creation of Gaston Design Incorporated (GDI) in 1996 and was the inspiration for the exhibit Animal Armor. Over the last 25 years, GDI has reconstructed many newly discovered dinosaur skeletons for leading paleontological institutions.



SERVICES

Gaston Design Inc (GDI) specializes in the restoration, molding, and casting of fossil skeletons, as well as gift shop lines of smaller paleontological replicas (teeth, claws, skulls, etc.). In addition to cast replicas, Gaston Design offers museum services such as skeleton mounting, exhibit design and construction, and traveling exhibits.



MUSEUMS

Gaston Design Inc's skeletons and casts are on display, or in the collections and gift shops of many museums world-wide. Some of these include the following;

- Denver Museum of Nature and Science
- Utah Museum of Natural History
- The Smithsonian Institution
- The Carnegie Museum of Natural History
- The National Museum of Science, Tokyo, Japan
- The Field Museum, Chicago, IL
- Royal Ontario Museum, Ontario, Canada
- Museo Del Desierto, Saltillo, Coahuila, Mexico
- American Museum of Natural History



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