



MEMO

PALEO NEWS

RANGER TRAINING

DINO DOSSIER

RESOURCES

2025 IS STARTING OFF WITH A BANG!!

IN THE LAST FEW WEEKS WE'VE NOT ONLY GOTTEN THE TRAILER FOR THE NEXT ENTRY IN THE JURASSIC FRANCHISE, JURASSIC WORLD REBIRTH, BUT ALSO OUR FIRST IMAGES FROM THE NEW WALKING WITH DINOSAURS SERIES THAT'S COMING THIS SUMMER, WE'VE CELEBRATED THE 200TH ANNIVERSARY OF IGUANODON'S DESCRIPTION, AND OF COURSE THERE HAS BEEN LOADS OF OTHER NEW PALEO NEWS AND RESEARCH (I SERIOUSLY AM JUST PLAYING CATCH-UP AT THIS POINT, NOT EVEN ABLE TO FIT EVERYTHING IN JUST THESE FIRST TWO ISSUES!)

SPRING TIME IS ALSO WHEN SEVERAL MUSEUMS WILL BE HOSTING SOME REALLY GREAT PALEO-RESEARCH SYMPOSIUMS LIKE PALEOFEST AND DINOS & MOR. SOMETHING ADDED TO THIS ISSUE IS A LISTING OF SOME LIVE AND VIRTUAL PRESENTATIONS COMING UP THAT I HOPE PEOPLE ENJOY! I'M LOVING THAT SO MANY INSTITUTIONS ARE STRIVING TO MAKE RESEARCH AND EDUCATION SO ACCESSIBLE TO THE PUBLIC IN SO MANY WAYS. ESPECIALLY NOW...

-).

MEMOPALEO NEWSRANGER TRAININGDINO DOSSIERRESOURCES

FOSSILIZED BONES RECENTLY EXCAVATED IN TAIPINGGANG, SIHUI CITY, GUANGDONG PROVINCE, ARE NOW BELIEVED TO FROM A LAMBEOSAURINI (A SUBFAMILY OF PLANT-EATING HADROSAUROIDEA (COMMONLY KNOWN AS "DUCK-BILLED" DINOSAURS, AND TYPICALLY ADORNED WITH IMPRESSIVE HEAD ORNAMENTATION.) THIS WOULD BE THE FIRST LAMBEOSAURINE FROM SOUTH CHINA. THE REMAINS INCLUDE SEVERAL LIMB BONES, AS WELL AS DORSAL AND CAUDAL VERTEBRAE. PAPER CO-AUTHOR XING LIDA STATES THAT "...[THE FIND] REPRESENTS THE ONLY EVIDENCE SUGGESTING A POTENTIAL MIGRATION OF NORTH AMERICAN DINOSAURS TO THE REGION IN LATE CRETACEOUS,"

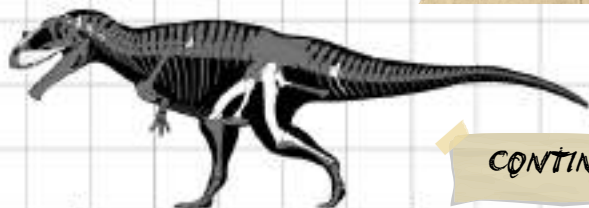
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ART BY ZUBIN ERIK DUTTA

A NEW OVIRAPTOR SPECIES, EONEOPHRON INFERNALIS ("DAWN NEOPHRON") FROM SOUTH DAKOTA, HAS BEEN DESCRIBED. RESEARCHERS STUDIED THE MICROSCOPIC ANATOMY AND DIFFERENCE BETWEEN THE NEW FOSSIL MATERIAL WITH PREVIOUSLY DESCRIBED OVIRAPTORS FROM THE AREA, LIKE ANZU, CONCLUDING THAT THE SPECIMEN REPRESENTS A NEW SPECIES OF CAENAGNATHID FROM THE HELL CREEK.

[Read More](#)

ONE OF "STROMER'S LOST EGYPTIAN DINOSAURS" HAS BEEN RE-EVALUATED AND DESCRIBED AFTER IMAGES WERE REDISCOVERED IN THE HUENE ARCHIVE AT THE UNIVERSITY OF TÜBINGEN (GERMANY.) THE ORIGINAL FOSSIL WAS UNFORTUNATELY DESTROYED DURING WORLD WAR 2, BUT THE NEW IMAGE AND A PHOTOGRAPH OF THE MAXILLA IN MEDIAL VIEW ARE USED TO COMPLEMENT THE DESCRIPTION OF THE SPECIMEN, AS WELL AS TO VERIFY STROMER'S OWN NOTES. NAMED TAMERYRAPTOR MARKGRAFI (MEANING "THIEF FROM THE BELOVED LAND",) THE CARCHARODONTOSAURID WAS ABOUT 8-9 METRES (26-30 FT) IN LENGTH, AND HAD A HORN-LIKE PROTUBERANCE ON ITS SNOUT.

[Read More](#)

CONTINUE





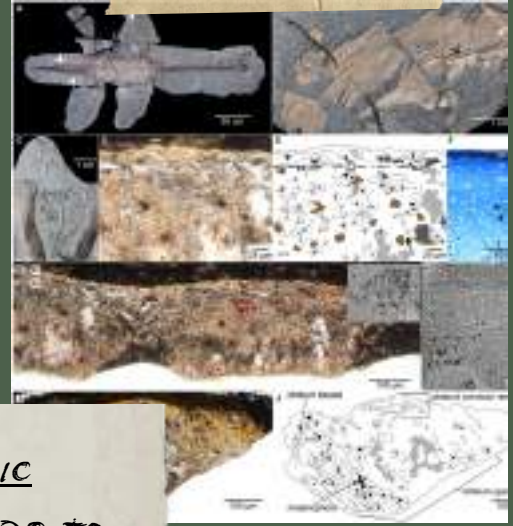
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NEW IN-DEPTH ANALYSIS OF SOFT TISSUES OF JURASSIC PLESIOSAUR HAS FOUND THAT THE MARINE REPTILE APPEARS TO HAVE SCALE-LIKE STRUCTURES SIMILAR TO SEA TURTLES! WHILE THE SPECIMEN WAS FOUND IN 1940, IT WASN'T PREPPED UNTIL 2020 – 75 YEARS LATER. THE SHALE (A FINE-GRAINED SEDIMENTARY ROCK FORMED FROM MUD) THAT THE ANIMAL WAS PRESERVED IN ALLOWED FOR EXCELLENT FOSSILIZATION, ENOUGH THAT RESEARCHERS WERE ABLE TO FIND WHAT LOOK TO BE SKIN NUCLEI UNDER A MICROSCOPE.

[Read More](#)



ART BY JOSCHUA KNÜPPE



ART BY DORIAN NOEL

A NEW SPECIMEN OF LATOPATECARPUS WILLISTONI HAS BEEN EXCAVATED AND DESCRIBED. LATOPATECARPUS BELONGS TO SUBFAMILY OF MOSASAURIDS CALLED THE PLIOPATECARPINA, WHICH WERE WIDE-SPREAD IN THE OCEANS AND INTERIOR SEAWAYS OF THE LATE CRETACEOUS. THE PARTIAL SKELETON WAS EXCAVATED FROM THE PIERRE SHALE IN SOUTH DAKOTA.

[Read More](#)

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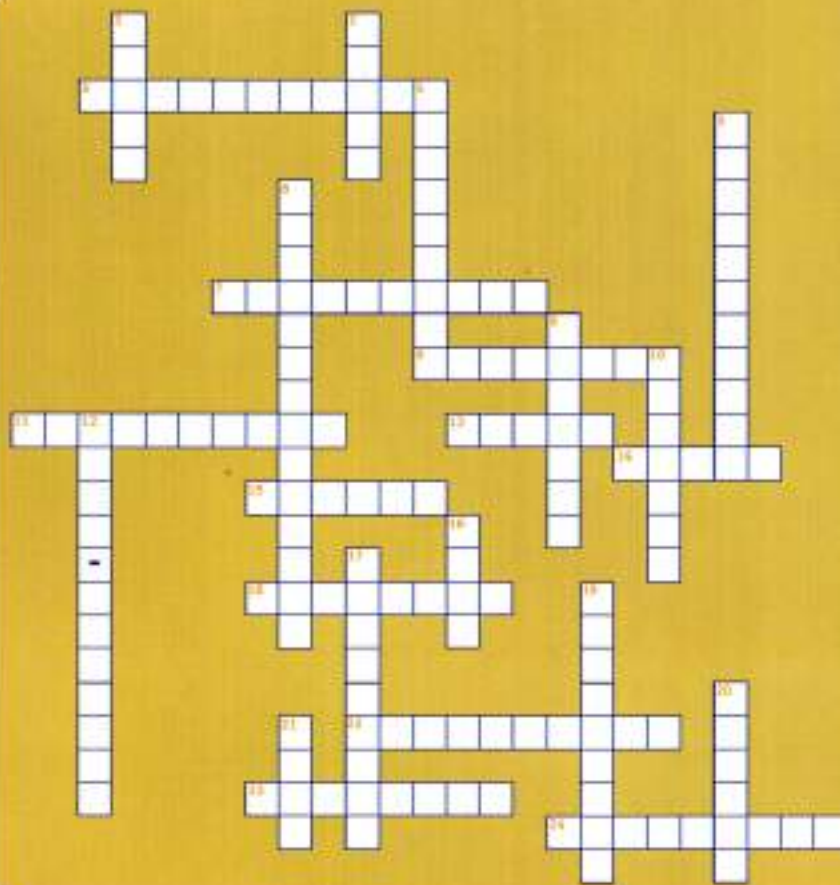
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## FIELD RESEARCH:



### ANSWERS:

EXCAVATION  
BIRDS  
THREE  
HERBIVORE  
PREHISTORIC  
SKIN  
CARNIVORE  
EXTINCT  
SKULL  
PALEONTOLOGIST  
FOSSIL  
HUMMINGBIRD  
VEGETATION  
PREY  
PLANTS  
CONTINENT  
SERRATED  
COLD-BLOODED  
CRETACEOUS  
MILLION  
PREDATORS  
TERRIBLE  
ASTEROID  
WORLD

### DOWN

- Dinosaurs lived in the Mesozoic Era. The Mesozoic Era consisted of worlds, the Triassic, the Jurassic and the Cretaceous.
- The Triassic consisted of one giant continent called Pangaea and one ocean called Panthalassa.
- The Jurassic world came when the one giant split into two.
- If birds can be classified as dinosaurs, then the tiniest dinosaur found today is the Bee of Cuba. This dinosaur is not much larger than a bumblebee.
- A is what you call a scientist that studies dinosaurs.
- Dinosaurs first appeared over 230 years ago.
- Dinosaurs became 65 million years ago.
- Birds, mammals and humans are warm-blooded, (their body temperature remains the same). Reptiles are This means their body temperature varies.
- Dinosaur does not fossilize, but impressions in rock show that most dinosaurs had pebbly scales. (Hint: It covers your bones).
- An was strictly a plant eater. They had to spend nearly all their time feeding just to stay alive.
- A eats meat. They had large pointy, sharp teeth. One example is the Tyrannosaurus Rex. He measured up to 39 feet tall and weighed up to 6 tons.
- Herbivorous dinosaurs evolved into four-legged creatures using their stout legs for standing to eat and leaves.
- Carnivorous dinosaurs tended to have shorter arms than legs, evolving from two-legged ancestors that used its arms for grabbing

### ACROSS

- is the era preceding recorded history. Planet Earth was different—the climate was hotter and the land was covered by deserts and fern-like vegetation.
- Shallow seas divided continents into separate islands. This was called the world and looked similar to our world today.
- In 1842 Richard Owen coined the name dinosaur, which meant Lizard. (Hint: It's not nice).
- Teams of paleontologist dig to remove dinosaur remains. This is called
- Like years, a dinosaur's protected its brain and housed organs for sight, smell and hearing.
- Most scientists now believe that not all dinosaurs became extinct, are believed to be descendants of small, carnivorous dinosaurs.
- We know so much about dinosaurs because of remains. (Hint: Bones and footprints found in rocks are good examples).
- No one really knows what caused the extinction of dinosaurs. Some scientists believe it was caused by a sudden catastrophe, such as a massive comet or collision.
- Herbivorous dinosaurs were geared to eating
- Carnivorous dinosaurs had massive jaws operated by powerful muscles, and their teeth had edges like a saw.
- had large fangs and claws—they would use these to prey upon other dinosaurs.

ANSWERS ON PAGE #9



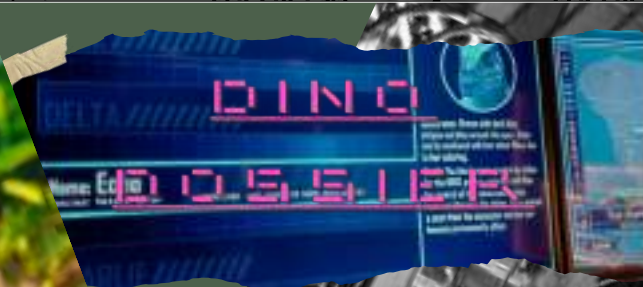
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## CRYOLOPHOSAURUS

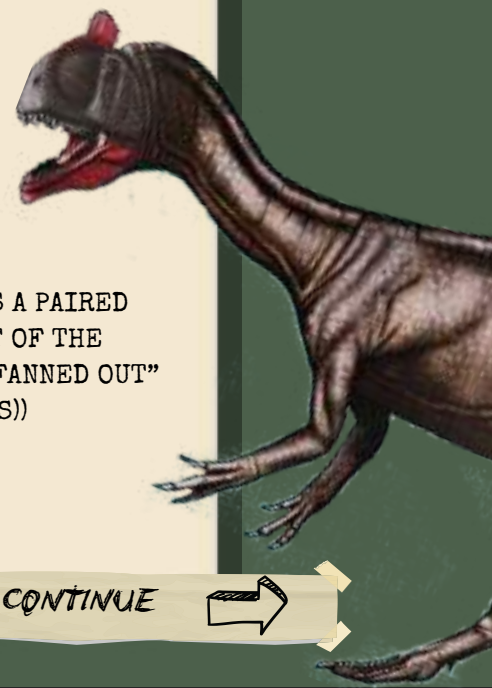
<u>CLADE</u>	NEOTHEROPODA (SEE BELOW)	<u>SPECIES</u>	ELLIOTT
<u>LENGTH</u>	6-7.7 M (20-25 FT)	<u>HEIGHT</u>	1.5-2 M (5- 6.5 FT) AT THE HIPS
<u>WEIGHT</u>	525 KG (1,200 LBS)	<u>DIET</u>	CARNIVORE
<u>LOCATION</u>	ANTARCTICA	<u>TIME PERIOD</u>	189-180 MYA (EARLY JURASSIC - SINEMURIAN OR PLIENSBAKHIAN)

### NOTES: ("KRY-OH-LOAF-OH-SAW-RUS")

EXCAVATED FROM THE HANSON FORMATION IN ANTARCTICA IN THE EARLY 90S, CRYOLOPHOSAURUS ELLIOTT IS ONE OF THE LARGEST THERAPODS FROM THE EARLY JURASSIC, TO DATE.

WHILE BEING THE FIRST THEROPOD DINOSAUR DISCOVERED IN ANTARCTICA MIGHT BE "COOL" ENOUGH, THIS DINOSAUR IS MOST FAMOUSLY KNOWN FOR ITS IMPRESSIVE HEAD ORNAMENTATION.

THE PARTIAL SKULL MATERIAL EXCAVATED INCLUDES A PAIRED CREST LIKE STRUCTURE THAT RUNS TOWN THE SNOUT OF THE ANIMAL AND INTO A LARGE TRANSVERSE CREST (OR "FANNED OUT" (THINK SIMILAR TO SOME GREEK AND ROMAN HELMETS)) STRUCTURE.



### IMAGE KEY

CRYOLOPHOSAURUS CONCEPT ART FOR  
WARPATH: JURASSIC PARK BY MATT HALL  
(UPPER CENTER)

MATTEL'S SECOND JURASSIC WORLD  
CRYOLOPHOSAUR FIGURE (UPPER LEFT)

CRYOLOPHOSAUR ON DISPLAY AT THE  
FRYKELL MUSEUM (ROCK ISLAND, IL)  
(UPPER RIGHT)

CRYOLOPHOSAUR ART BY ROBERT WALTERS  
(BOTTOM RIGHT)

CONTINUE



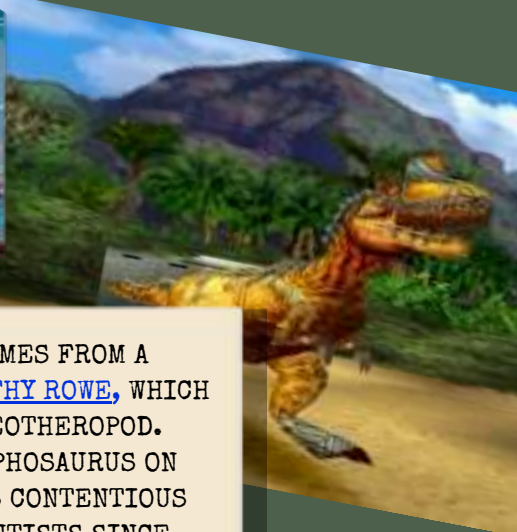
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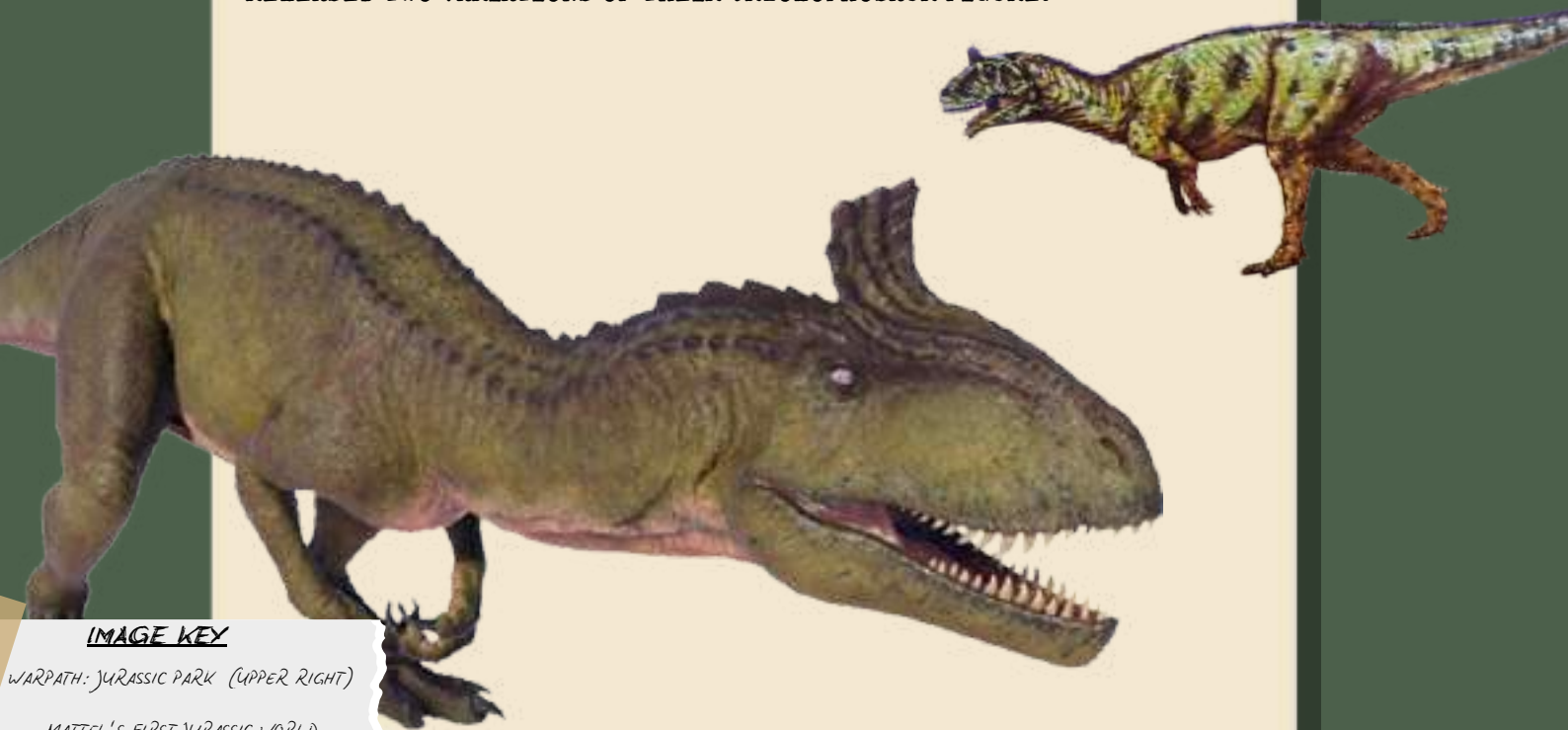
RESOURCES



THE MOST RECENT CLASSIFICATION COMES FROM A [2020 STUDY BY ADAM MARSH AND TIMOTHY ROWE](#), WHICH PLACES CRYOLOPHOSAUR AS A BASAL NEOOTHEROPOD. HOWEVER, THE PLACEMENT OF CRYOLOPHOSAURUS ON THE DINOSAUR EVOLUTIONARY TREE IS CONTENTIOUS AND HAS PROVEN DIFFICULT FOR SCIENTISTS SINCE ITS DISCOVER, AS IT SHARES TRAITS WITH A WIDE NUMBER OF THEROPOD GROUPS.

WHEN IT COMES TO THE JURASSIC FRANCHISE, THERE'S BEEN VERY LITTLE OF CRYOLOPHOSAURUS- BUT WHEN SHE APPEARS, IT'S ALWAYS A TREAT.

THE FIRST APPEARANCE OF THE DINOSAUR WAS IN THE PLAYSTATION GAME WARPATH: JURASSIC PARK, A FIGHTING GAME SIMILAR TO PRIMAL RAGE OR MORTAL KOMBAT WHERE YOU PLAY AS VARIOUS DINOSAURS. CRYO ALSO APPEARED LATER IN JURASSIC WORLD EVOLUTION 2. MATTEL HAS, SO FAR, RELEASED TWO VARIATIONS OF THEIR CRYOLOPHOSAUR FIGURE.



#### IMAGE KEY

WARPATH: JURASSIC PARK (UPPER RIGHT)

MATTEL'S FIRST JURASSIC WORLD CRYOLOPHOSAUR FIGURE (UPPER LEFT)

CRYOLOPHOSAUR ART BY ROBERT WALTERS (MIDDLE RIGHT)

JURASSIC WORLD EVOLUTION 2 CRYOLOPHOSAUR (BOTTOM)



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### MUSEUM MUSTS



### BURPEE MUSEUM OF NATURAL HISTORY

237 N MAIN ST., ROCKFORD, IL 61103

(815) 965-3433

FEATURING MULTIPLE FLOORS OF EXPANSIVE COLLECTIONS, AND INCREDIBLY IMMERSIVE AND INTERACTIVE EXHIBITS SUCH AS JANE: DIARY OF A DINOSAUR (HOME OF THE MOST COMPLETE AND BEST-PRESERVED JUVENILE T. REX EVER DISCOVERED), AND HOMER'S ODYSSEY (FEATURING "HOMER" – A SUBADULT TRICERATOPS FROM [THE FIRST DESCRIBED TRICERATOPS BONEBED](#)), THE BURPEE MUSEUM IS AN ACTIVE CONTRIBUTOR TO BOTH SCIENTIFIC RESEARCH AND EDUCATION OUTREACH.

EACH MARCH, THE MUSEUM HOSTS PALEOFEST, NOW IT IT'S 26TH YEAR. PALEOFEST IS AN ANNUAL SYMPOSIUM WHERE THE BIGGEST AND MOST INFLUENTIAL NAMES IN PALEONTOLOGY SHARE AND DISCUSS THEIR LATEST RESEARCH AND FINDINGS WITH THE PUBLIC.

BURPEE ALSO OFFERS VOLUNTEER OPPORTUNITIES FOR THEIR SUMMER PALEONTOLOGICAL DIGS IN BOTH UTAH AND MONTANA, WORKING IN THE MORRISON AND HELL CREEK FORMATIONS.

PaleoFest™  
PRESENTED BY THE BURPEE MUSEUM

FEBRUARY 28 – MARCH 2, 2025

### UPCOMING LIVE & VIRTUAL LECTURES

#### ENGELHARDT-MOORE LECTURE SERIES

MARCH 6: DR. JOSEPH PETERSON, UNIVERSITY OF WISCONSIN  
BITE FORCE, FEEDING TRACES, AND ECOLOGY OF TYRANNOSAURUS REX THROUGHOUT ONTOGENY

#### ROYAL TYRRELL MUSEUM

FEBRUARY 20: CHRISTIANA GARROS, UNIVERSITY OF ALBERTA  
BROKEN, BRUISED, AND BITTEN: SURVIVAL TALES OF TYRANNOSAUR INJURIES

FEBRUARY 26: ANDRE GOGOL, PARKLAND SECONDARY SCHOOL  
EXPLORING METHODS IN FOSSIL PHOTOGRAPHY

MARCH 6: DARREN TANKE, ROYAL TYRRELL MUSEUM OF PALAEONTOLOGY  
ONGOING EPIC EXCAVATION OF THE KASKIE HADROSAUR SKELETON, ONE OF THE WORLD'S BIGGEST DINOSAUR QUARRIES, DINOSAUR PROVINCIAL PARK, ALBERTA

MARCH 13: LISA BOUCHER, UNIVERSITY OF TEXAS-AUSTIN  
FOSSIL PLANTS (TITLE TO BE CONFIRMED)

MARCH 20: KIERSTEN FORMOSO, RUTGERS UNIVERSITY  
GOING FOR A SWIM: INFLUENCES OF TERRESTRIAL ANCESTRY ON LAND-TO-SEA TRANSFORMATIONS

#### MUSEUM OF THE ROCKIES

VIRTUAL FOSSIL FRIDAYS – EVERY FRIDAY AT 9 AM MST

#### UTAH FRIENDS OF PALEONTOLOGY

FEBRUARY 21 — DR. JOSH LIVELY  
TERRIFIC, TERRIBLE LIZARDS

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## RECOMMENDED READS

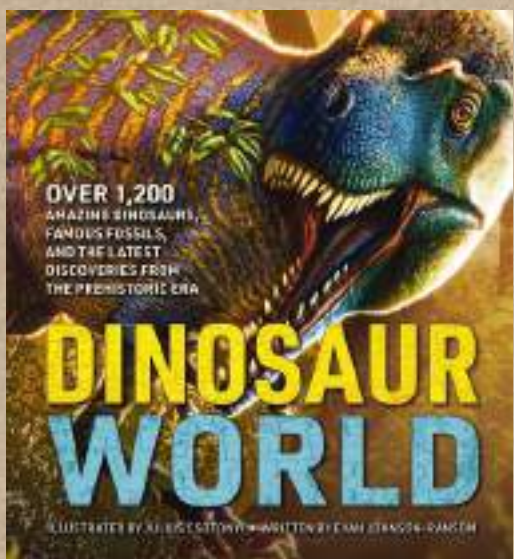


### SHE FOUND FOSSILS

WRITTEN AND EDITED BY DR. MARIA EUGENIA LEONE GOLD ,  
ABAGAEAL ROSEMARY WEST ILLUSTRATED BY AMY J. GARDINER

THIS INSPIRING BOOK LOOKS AT THE HISTORY OF PALEONTOLOGY AND HIGHLIGHTS MANY BRILLIANT WOMEN SCIENTISTS FROM VARIOUS BACKGROUNDS, DISPROVING ONCE AND FOR ALL THE SILLY NOTION THAT “FOSSILS IS FOR THE FEW.” SOME OF THE MOST FASCINATING AND GROUNDBREAKING RESEARCH AND IMPORTANT DISCOVERIES HAVE BEEN MADE BY WOMEN, AND THIS BOOK DOES A WONDERFUL JOB AT NOT JUST HIGHLIGHTING MANY OF THOSE INDIVIDUALS AND THE STRIDES THEY’VE MADE IN PALEONTOLOGY.

AVAILABLE IN ENGLISH, ESPAÑOL, AND CHINESE, THIS IS A MUST HAVE FOR THOSE INTERESTED IN THE HISTORY OF PALEONTOLOGY AND THE WOMEN WHO MADE IT THE FIELD IT IS TODAY.



### DINOSAUR WORLD

BY EVAN JOHNSON-RANSOM, ILLUSTRATED BY JULIUS CSOTONYI

DINOSAUR WORLD IS A GUIDEBOOK THAT HIGHLIGHTS 1,200 MESOZOIC SPECIES AND INCLUDES INFORMATION ON ANATOMY, DIET, HABITAT, AND ALL THEIR UNIQUE CHARACTERISTICS. IT ALSO PRESENTS THE LATEST IN SCIENTIFIC RESEARCH WHICH INFORMED THE CURRENT DEPICTIONS OF THE PREHISTORIC ANIMALS SEEN IN THE BOOK.

FEATURING JAW DROPPING PALEO ART, AND THE MOST UP TO DATE FACTS AND INFORMATION, IN A WORLD OF SO MANY OPTIONS WHEN IT COMES TO DINOSAUR GUIDE BOOKS, THIS IS ONE YOU CERTAINLY DO NOT WANT TO PASS UP.

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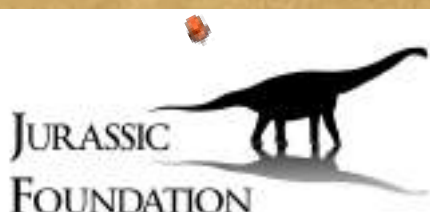
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## JURASSIC FOUNDATION

FOUNDED IN 1998 BY UNIVERSAL STUDIOS AND AMBLIN ENTERTAINMENT, THE JURASSIC FOUNDATION IS A NON-PROFIT ORGANIZATION DEDICATED TO ADVANCING DINOSAURIAN RESEARCH AROUND THE GLOBE. TO DATE, THE FOUNDATION HAS DONATED NEARLY \$1 MILLION DOLLARS TO SCIENTISTS TO CONDUCT THEIR RESEARCH. RECENT PUBLICATIONS ON RESEARCH AIDED BY THE JURASSIC FOUNDATION CAN BE FOUND ON THEIR [INSTAGRAM](#).

YOU CAN FIND OUT MORE ABOUT THE FOUNDATION, APPLY FOR GRANTS, AND GET IN CONTACT WITH FOUNDATION MEMBERS BY VISITING THEIR WEBSITE: [JURASSICFOUNDATION.ORG](http://JURASSICFOUNDATION.ORG)

## DOCUMENTARIES & SHOWS

### DINO BIRDS – PBS NOVA

HOW DID BIRDS MANAGE TO NOT ONLY LIVE THROUGH THE APOCALYPSE, BUT ALSO GO ON TO DIVERSIFY AND POPULATE EVERY CORNER OF OUR PLANET? NOW, RARE FOSSIL DISCOVERIES ARE REVEALING THE SECRETS OF BIRD EVOLUTION GOING BACK MORE THAN 100 MILLION YEARS, TELLING THE STORY OF HOW SOME RESILIENT FEATHERED DINOS PERSEVERED AND TRANSFORMED INTO THE VAST ARRAY OF COLORFUL BIRD SPECIES THAT FILL OUR SKIES TODAY.

## VIRTUAL EXHIBITS



### DARING TO DIG: WOMEN IN AMERICAN PALEONTOLOGY

DARING TO DIG EXPLORES THE ACHIEVEMENTS, ADVENTURES, AND DISCOVERIES MADE BY WOMEN IN AMERICAN PALEONTOLOGY OVER THE PAST FEW CENTURIES. THIS EXHIBIT ALSO CONSIDERS THE PERSONAL AND SOCIETAL CHALLENGES THAT THESE PIONEERING SCIENTISTS FACED AND EXAMINES THEIR PROFESSIONAL ACCOMPLISHMENTS IN THE BROADER CONTEXT OF THE HISTORY OF PALEONTOLOGY AS A SCIENTIFIC DISCIPLINE IN THE UNITED STATES.

THOUGH OFTEN UNRECOGNIZED, THE WORK OF WOMEN HAS SHAPED THE FIELD OF PALEONTOLOGY AS WE KNOW IT TODAY. AS WOMEN MOVED INTO PROFESSIONAL SCIENCE, THEY ENCOUNTERED RESISTANCE AT EVERY LEVEL REQUIRED FOR SUCCESS: HIGHER EDUCATION, FIELDWORK, EMPLOYMENT, PAY, PUBLICATION, AND MEMBERSHIP IN PROFESSIONAL SOCIETIES. DESPITE THESE BARRIERS, PIONEERING WOMEN FOUND WAYS TO SURPASS STEREOTYPES, CIRCUMVENT OBSTACLES, AND FORGE NEW PATHS IN THEIR EFFORTS TO CONTRIBUTE TO THE SCIENCE OF PALEONTOLOGY.



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## THANKS & ACKNOWLEDGEMENTS

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FOLLOWING INDIVIDUALS:

DR. M. EUGENIA L. GOLD

CONOR O'KEEFFE

KELLY BRESNOWITZ

JACK DE LA MARE & THE ENTIRE OUTPOST TEAM

## RANGER TRAINING CROSSWORD ANSWER KEY

"FIELD RESEARCH"  
CROSSWORD PUZZLE  
FROM THE  
JURASSIC PARK 3  
DINOSAUR TRAINING  
GAMES  
PUZZLE BOOK

