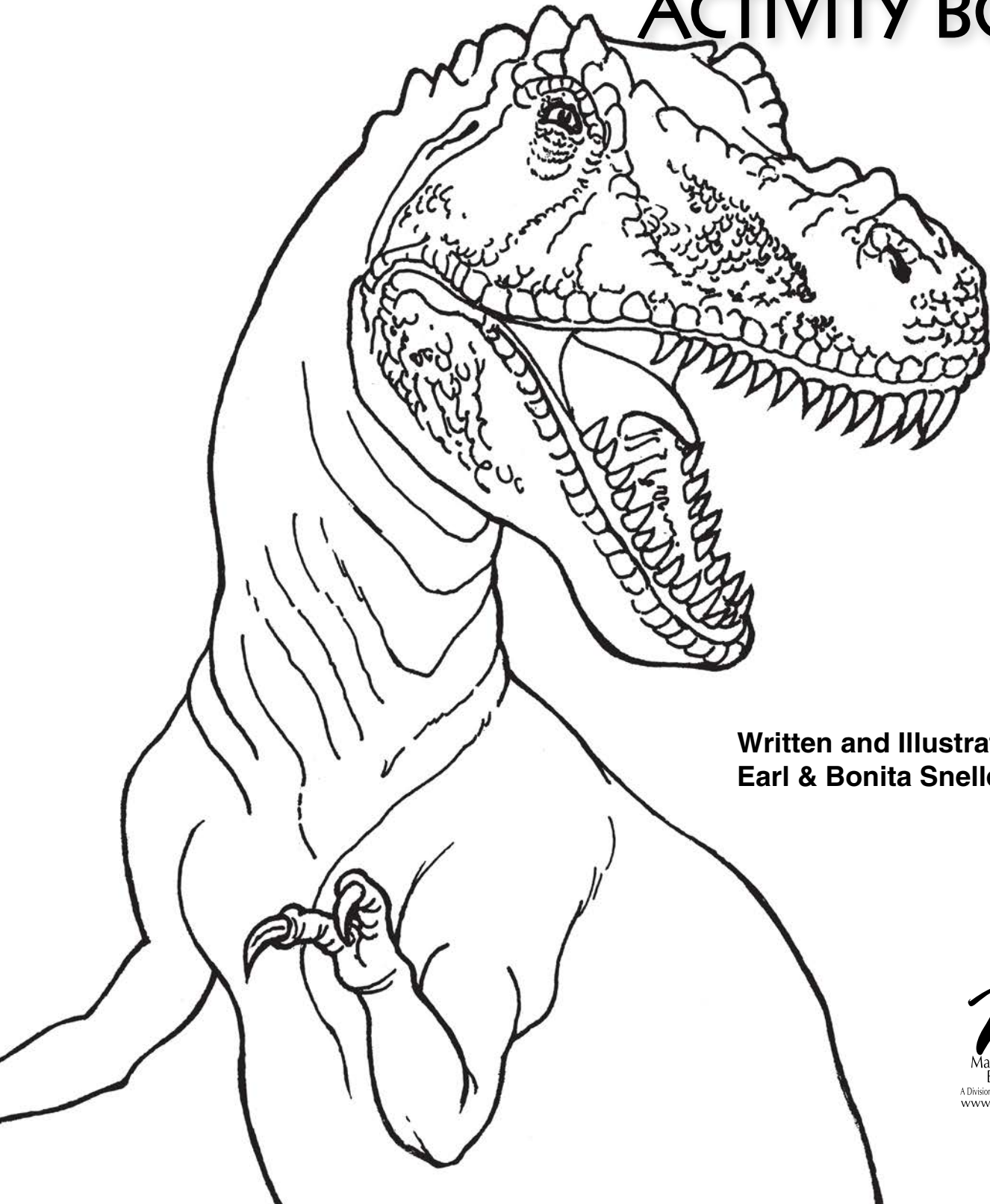


THE WONDERS OF GOD'S WORLD

DINOSAUR

ACTIVITY BOOK



Written and Illustrated by
Earl & Bonita Snellenberger

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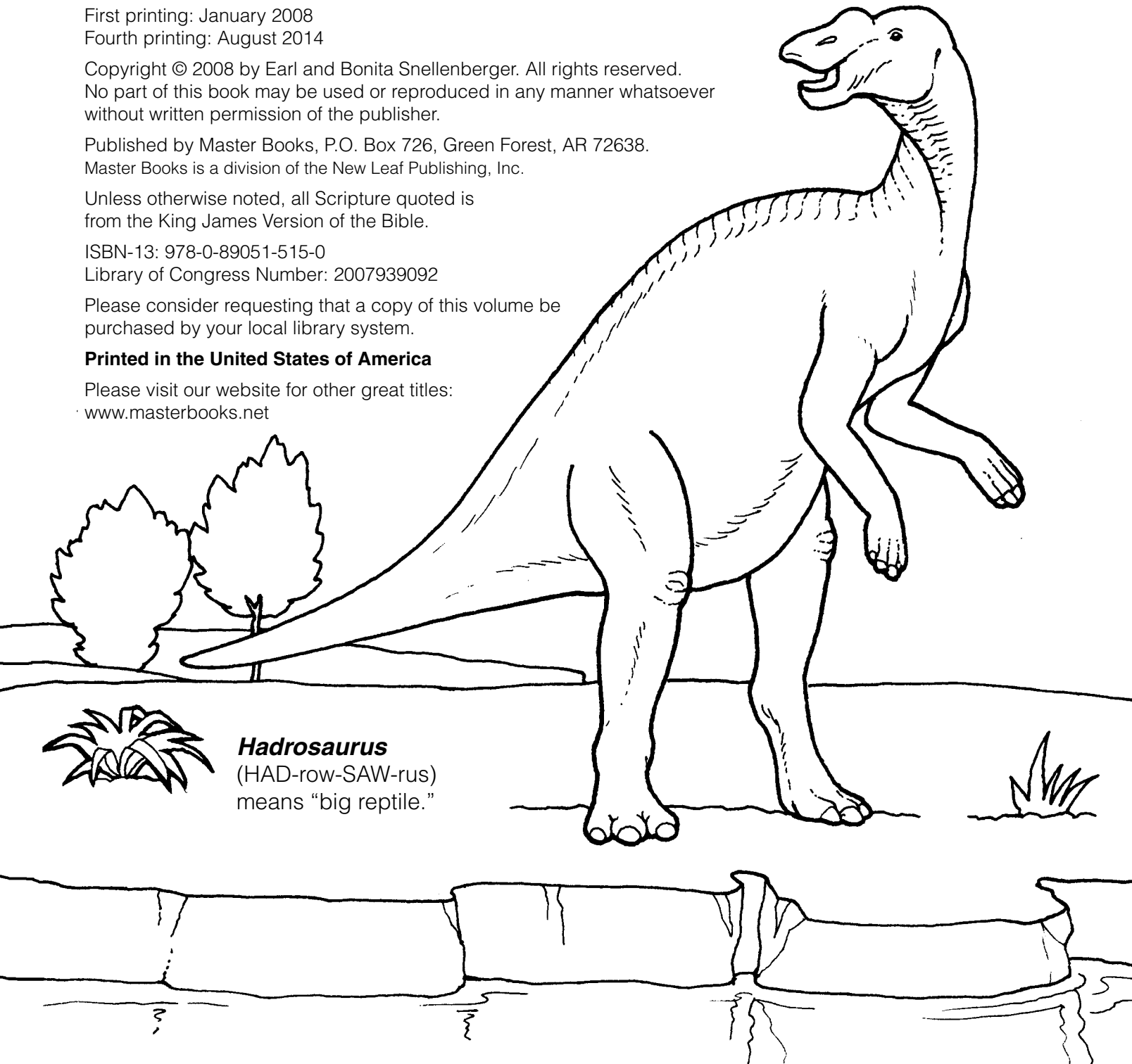
Unless otherwise noted, all Scripture quoted is
from the King James Version of the Bible.

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Hadrosaurus
(HAD-row-SAW-rus)
means "big reptile."

Dinosaurs and Dinosaur-like Animals

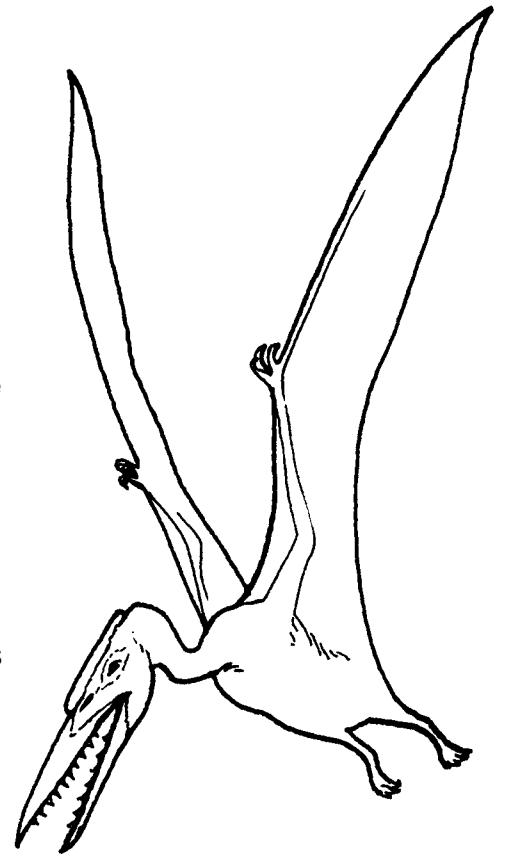
Anyone might expect a big dinosaur activity book to have many different dinosaurs in it. And it does! But this book is also about much more than dinosaurs.

Technically speaking, the term "dinosaur" should be used only to describe a particular group of reptiles that lived on land. In some books, however, you may find an author describing some creatures that flew in the air as "flying dinosaurs." In other books you may find the author calling certain animals that lived in the water "aquatic dinosaurs."

We could call these creatures that flew in the sky and swam in the oceans “dinosaur-like” animals, but it would be incorrect to say that they are dinosaurs. Dinosaurs were earthbound creatures that only lived on land, although some may have been able to swim well as do many land animals alive today.

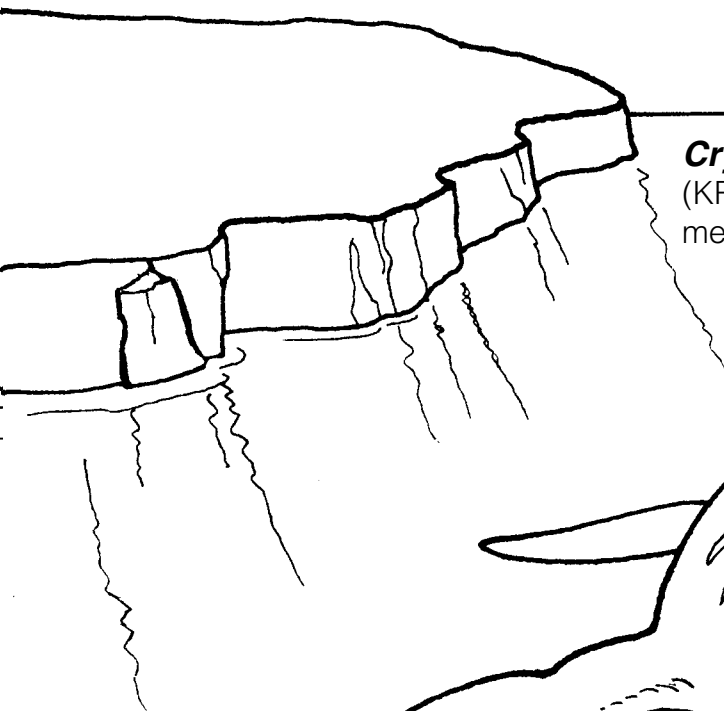
While they are not truly dinosaurs, this book includes many dinosaur-like beasts as a part of “dinosaur life” because they are usually associated with dinosaurs in books, films, and television shows. Whatever their differences, however, there is one thing true dinosaurs do have in common with dinosaur-like animals — we can know for certain they all were created by God!

The Bible says in Exodus 20:11, “For in six days the LORD made heaven and earth, the sea, and all that in them is. . . .” Dinosaurs and every other animal that ever lived on earth are all special creations of God.



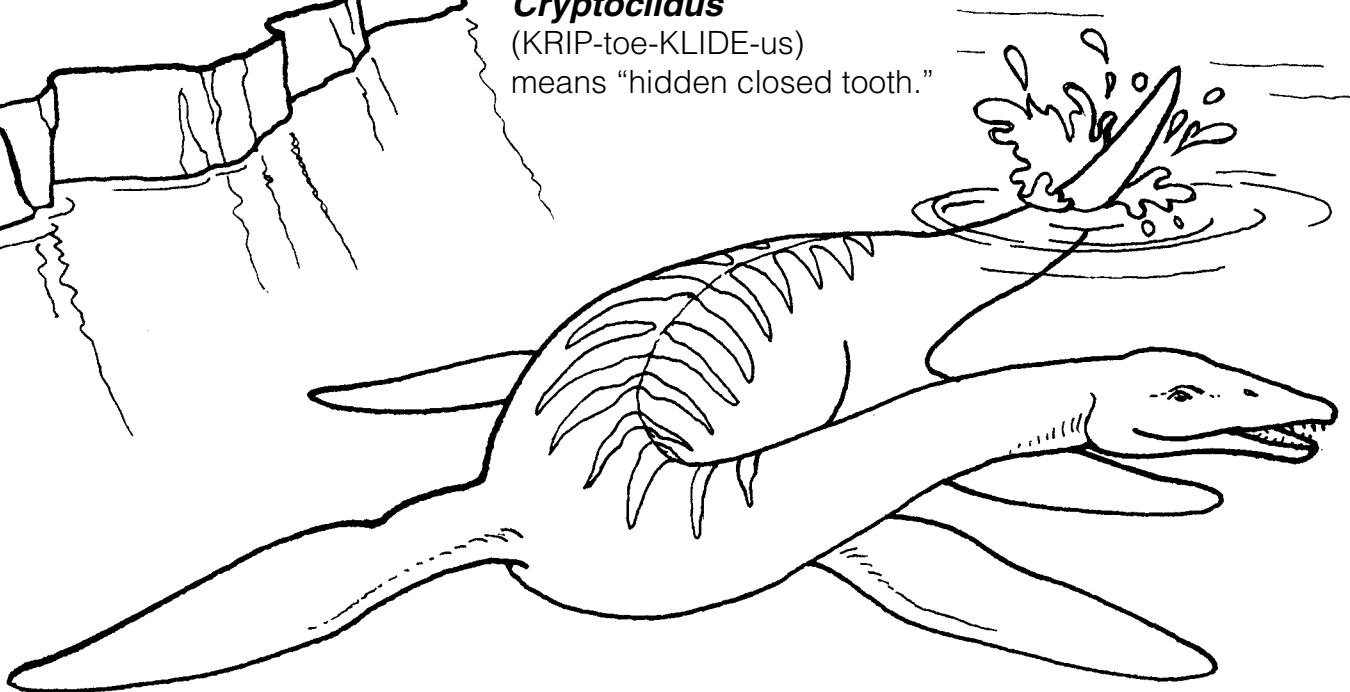
Germanodactylus

(jer-MAN-oh-DAK-tih-lus)
means “German finger.”



Cryptoclidus

(KRIP-toe-KLIDE-us)
means “hidden closed tooth.”

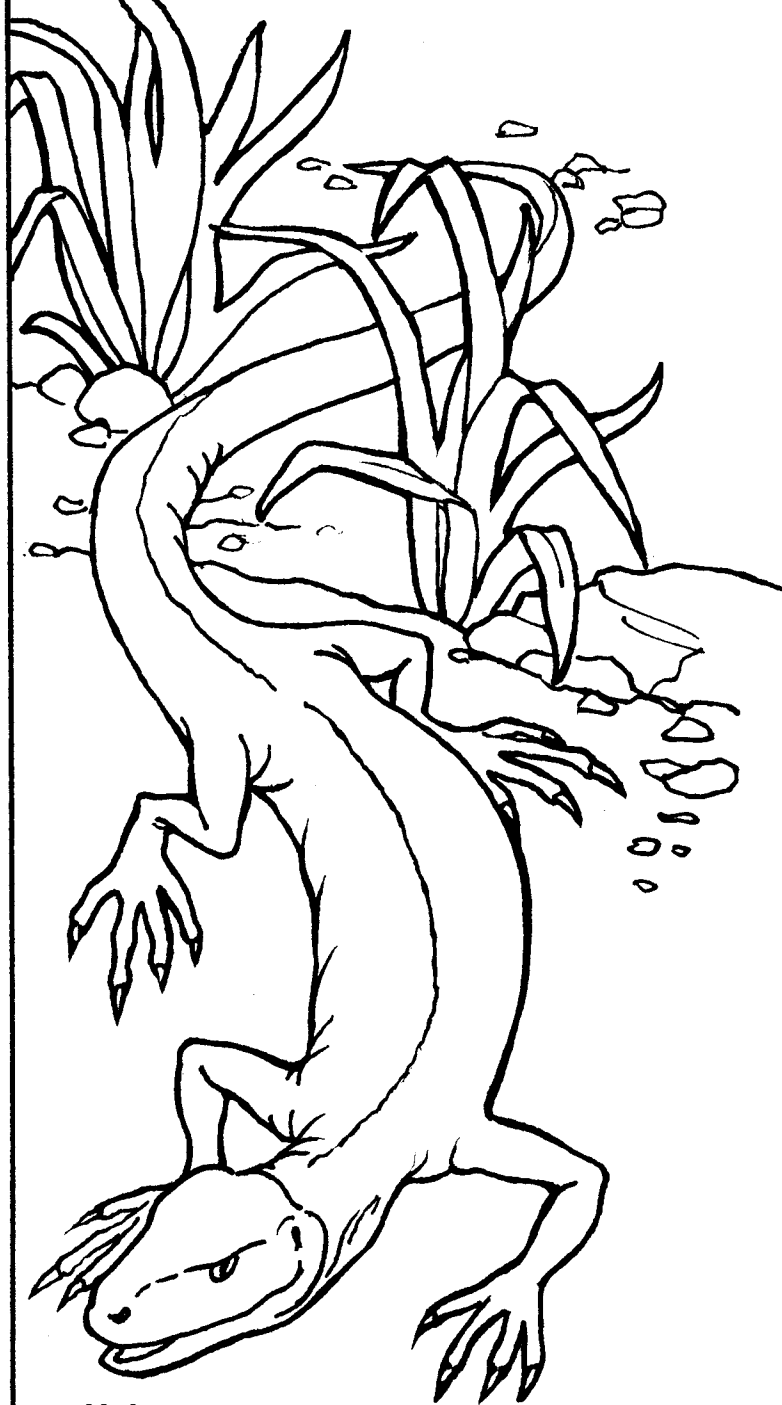


What Makes a Dinosaur a Dinosaur?

Scientists believe that dinosaurs are a special type of reptile. A reptile is any of a class (*Reptilia*) of cold-blooded, air-breathing vertebrates (having a segmented spinal column), including snakes, crocodiles, lizards, and turtles, and having bodies usually covered with horny plates or scales.

Sir Richard Owen, famed anatomist and founder of the British Museum of Natural History, invented the word *dinosaur* in 1841. Owen did this when he realized that the bones of two huge, extinct creatures he examined were different from any of the reptiles listed above — different from any other group of land animals he had studied. Owen felt the two creatures were from a unique group that needed its own name, so he coined the word “dinosaur,” which means “terrible lizard.” Since dinosaurs are not actually lizards, the word “dinosaur” is often translated “terrible reptile” today.

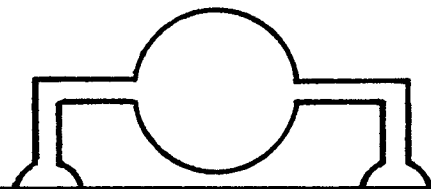
What is the difference between a dinosaur and other similar land creatures? It isn't a matter of size. There were tiny dinosaurs as well as enormous dinosaurs. And it isn't a matter of how many legs the creature had. Some dinosaurs were quadrupedal (walking on four legs), while others were bipedal (walking on two legs). What matters is the placement of the legs related to the body and their movement. Unlike other reptiles, the legs of dinosaurs were placed under the bodies. A wide-spread, crocodile-like stance is not suitable for more than a short sprint. But dinosaurs could support their bodies with little effort upon the underslung legs God gave them, allowing them to move quickly over great distances without tiring.



Hylonomus

(hie-luh-NOE-muss)
means “wood dweller.”

Hylonomus was not a dinosaur, but a lizard-like reptile. It would have likely walked with a serpentine waddle, belly to the ground.

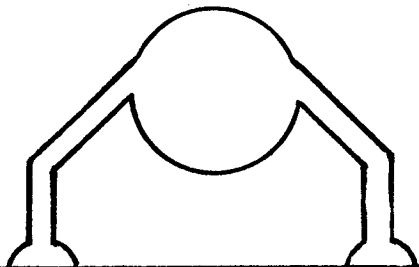


LEGS SPREAD WIDE IN A
SPRAWLING POSITION

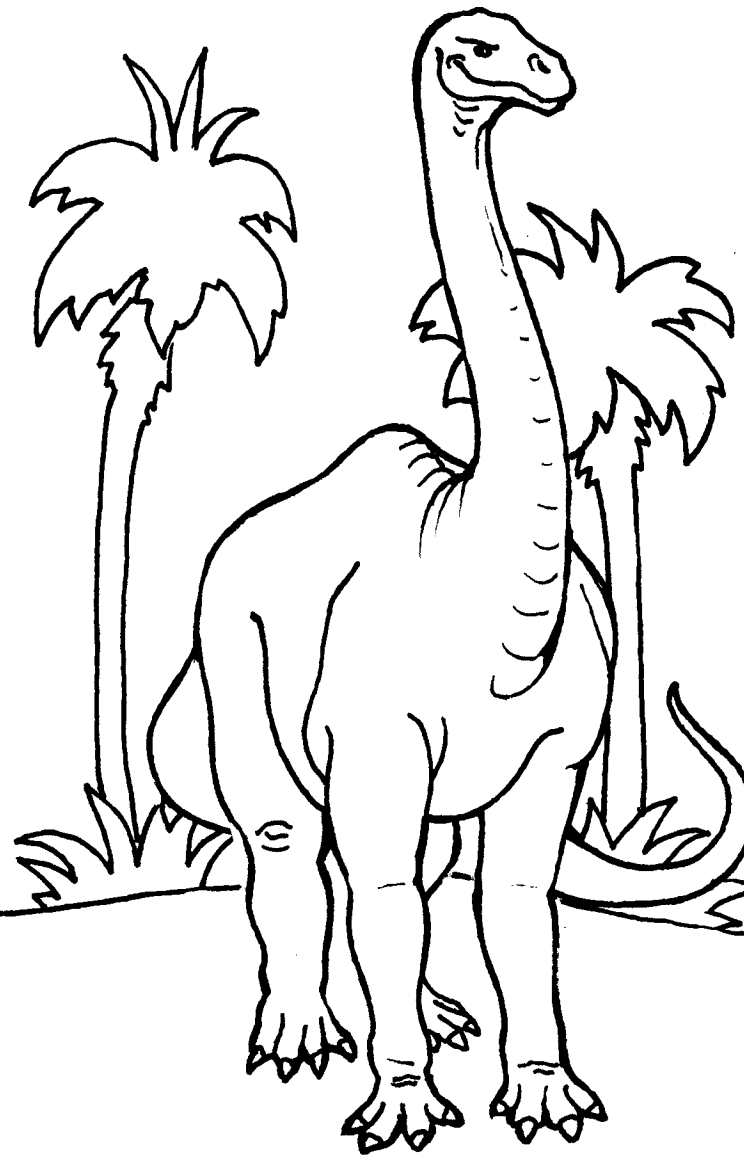


Inostrancevia

(in-OS-tran-SEV-ee-ah) was named after Russian paleontologist Aleksandr Inostrancev. *Inostrancevia* was not a true dinosaur, but one of the extinct reptiles of the order *Therapsid*, falsely imagined by evolutionists to be the ancestors of mammals.

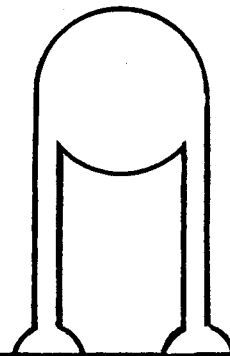


LEGS BENT OUT IN A CROCODILE-LIKE POSITION



Melanorosaurus

(mel-ah-nor-uh-SAW-rus) means "black mountain reptile." *Melanorosaurus* was a dinosaur.



A DINOSAUR'S LEGS WERE IN AN UNDER-THE-BODY POSITION

Fossils — Evidence of a Global Catastrophe

The word *fossil* comes from a Latin word meaning “dug up.” Much of what is known about dinosaurs has come from examining their dug-up fossilized remains. Dinosaur fossils have been found on every continent, so there is no doubt they once existed on planet earth. Most of the dinosaur fossils that fill today’s museums were collected in the last 150 years. Fossilized dinosaur bones were found in earlier times, but no one fully understood what they were.

Sir Richard Owen realized what dinosaur fossils were, however, for he was a man who believed the Bible is God’s Word — and that everything in it is absolutely true. He realized that dinosaur fossils were the remains of creatures buried long ago, most likely in the global flood of Noah’s time.

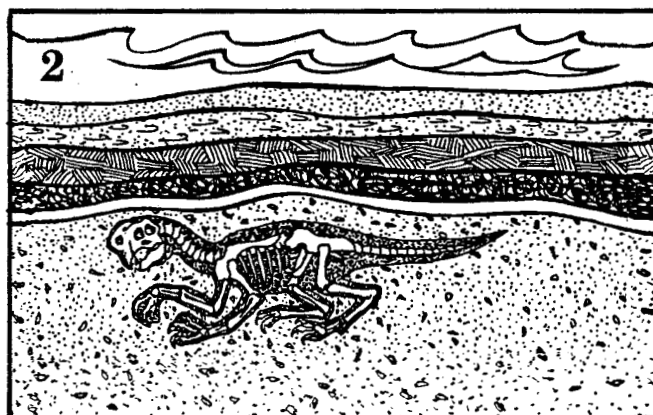
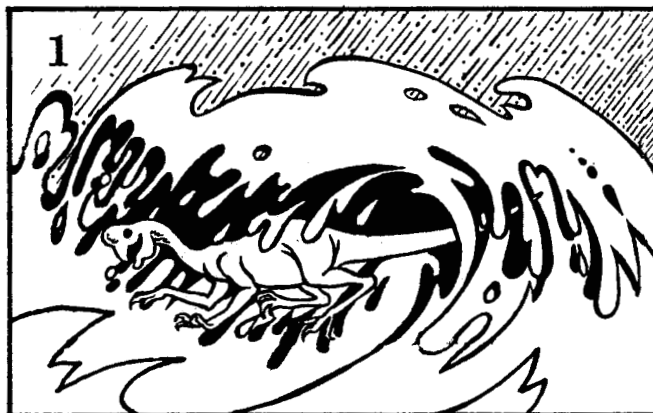
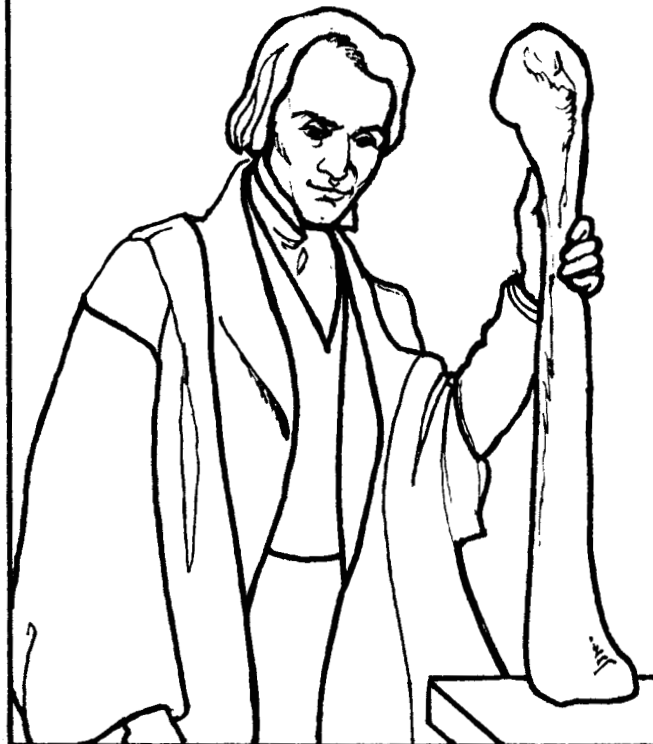
How Fossils Were Formed

Fossils are the remains of plants and animals that have been preserved in rock. Fossils are not formed when a living thing dies under normal conditions — scavengers, decay, and weather destroy their remains. Most fossils start out as plants and animals trapped in sediment — the mud or sand that settles from flood waters. In fact, the Great Flood is the best explanation for the thousands upon thousands of dinosaur fossils that have been found from Alaska and Siberia to Antarctica.

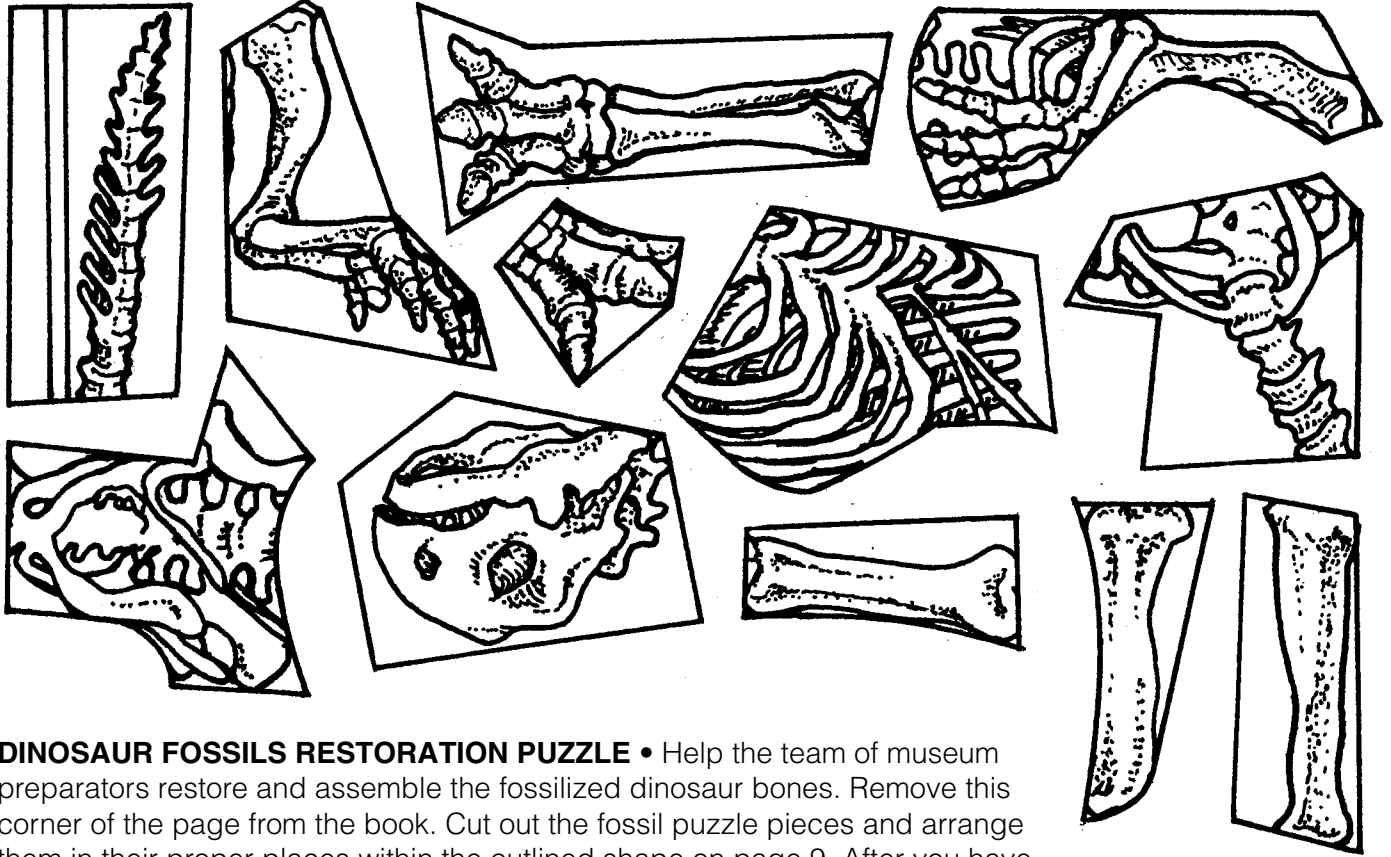
This is how dinosaur fossils came to be as a result of the Great Flood:

1. The Great Flood suddenly buried a dinosaur under tons of water and mud. Escape was impossible.

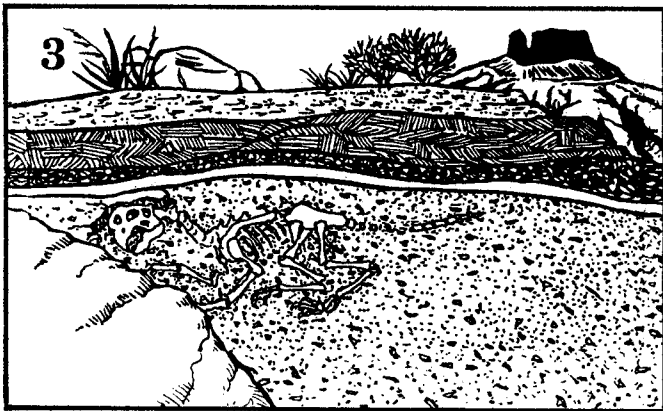
Sir Richard Owen made up the word *dinosaur*, which means terrible lizard (*deino* = terrible; *sauros* = lizard).



CUT ON THIS DOTTED LINE TO KEEP PAGES FROM FALLING OUT OF THIS BOOK



DINOSAUR FOSSILS RESTORATION PUZZLE • Help the team of museum preparators restore and assemble the fossilized dinosaur bones. Remove this corner of the page from the book. Cut out the fossil puzzle pieces and arrange them in their proper places within the outlined shape on page 9. After you have arranged all the puzzle pieces correctly, paste or glue them in place.



2. The dinosaur's body was trapped by layers of sediment laid down by the Flood's waters. Soft body parts decayed, but the bones remained.

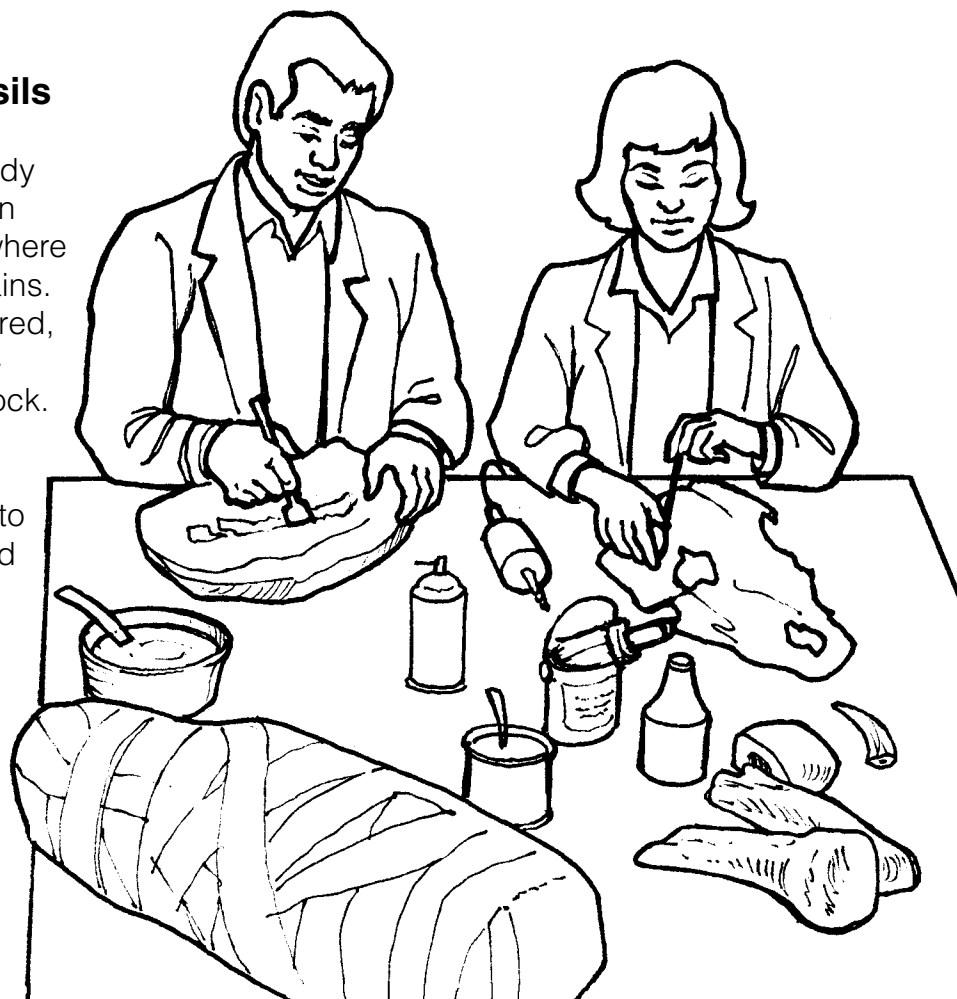


3. God caused high mountains to rise up and deep valleys to sink down so that the Flood waters "fled" and "hastened away" into new, enlarged ocean basins (Psalm 104:5-9). The earth began to dry out, and minerals in the mud, sand, and water replaced the bones — and they became like rock.

4. Dinosaur fossils become exposed as the ground around them erodes away or people dig for them. Dinosaur fossils are a testimony to the worldwide graveyard the earth became as a result of the Great Flood.

Reconstructing Dinosaur Fossils

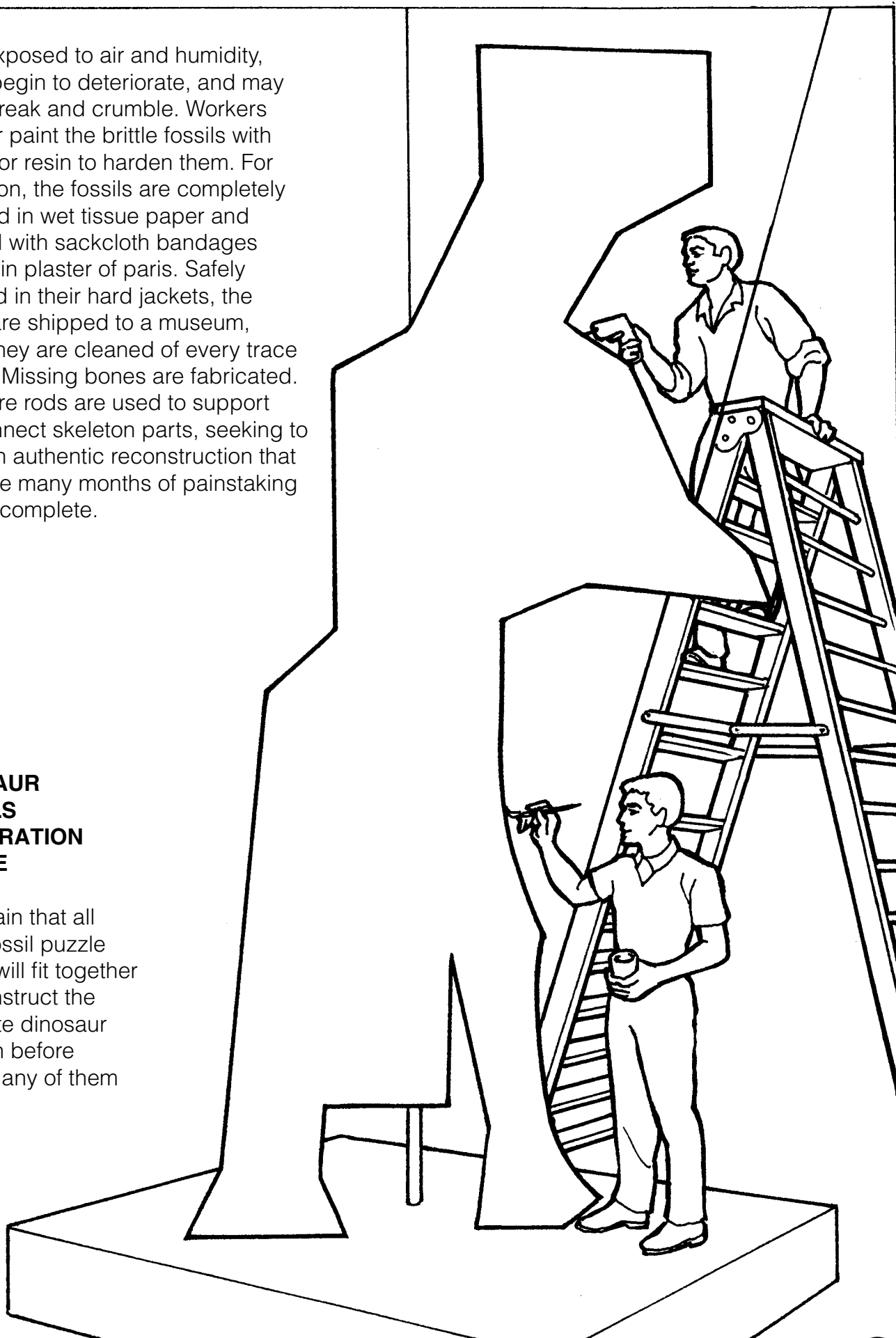
Paleontologists are scientists who study fossils. To paleontologists interested in studying dinosaurs, a “dig” is a site where workers dig to unearth dinosaur remains. When a dinosaur fossil dig is discovered, paleontologists may need to use bulldozers or dynamite to move tons of rock. Then picks and shovels are utilized, followed by careful hand work with hammers, chisels, and small spades to remove the fossils safely from the hard surrounding stone. Fossils are numbered, measured, and photographed. Exact diagrams are made of the location of the fossils to help museum technicians, called preparators, reconstruct the dinosaurs as accurately as possible.

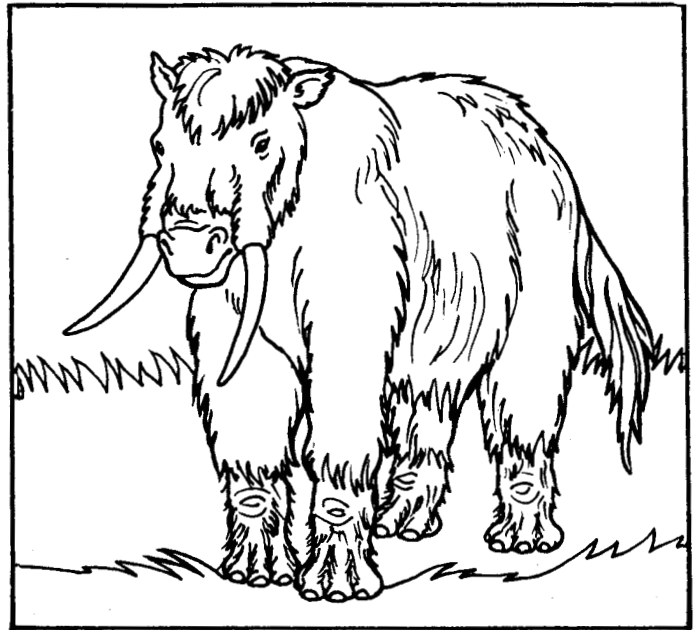
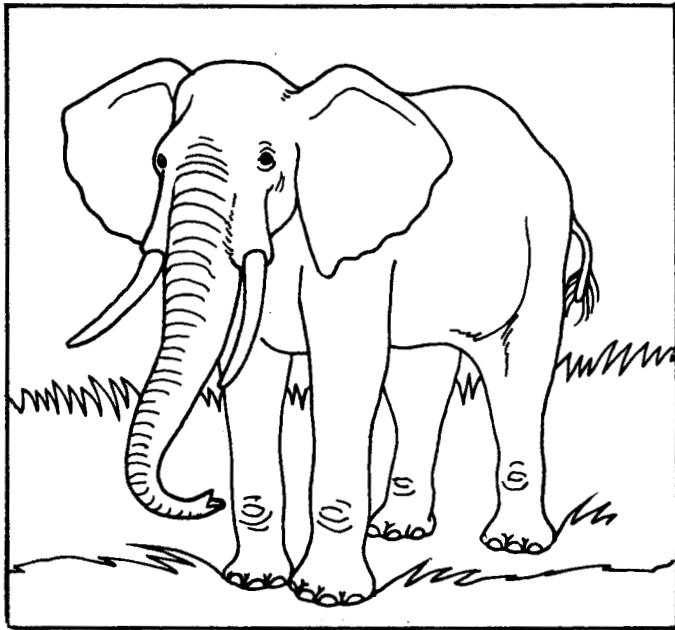


Once exposed to air and humidity, fossils begin to deteriorate, and may easily break and crumble. Workers spray or paint the brittle fossils with shellac or resin to harden them. For protection, the fossils are completely wrapped in wet tissue paper and covered with sackcloth bandages soaked in plaster of paris. Safely encased in their hard jackets, the fossils are shipped to a museum, where they are cleaned of every trace of rock. Missing bones are fabricated. Then wire rods are used to support and connect skeleton parts, seeking to make an authentic reconstruction that may take many months of painstaking work to complete.

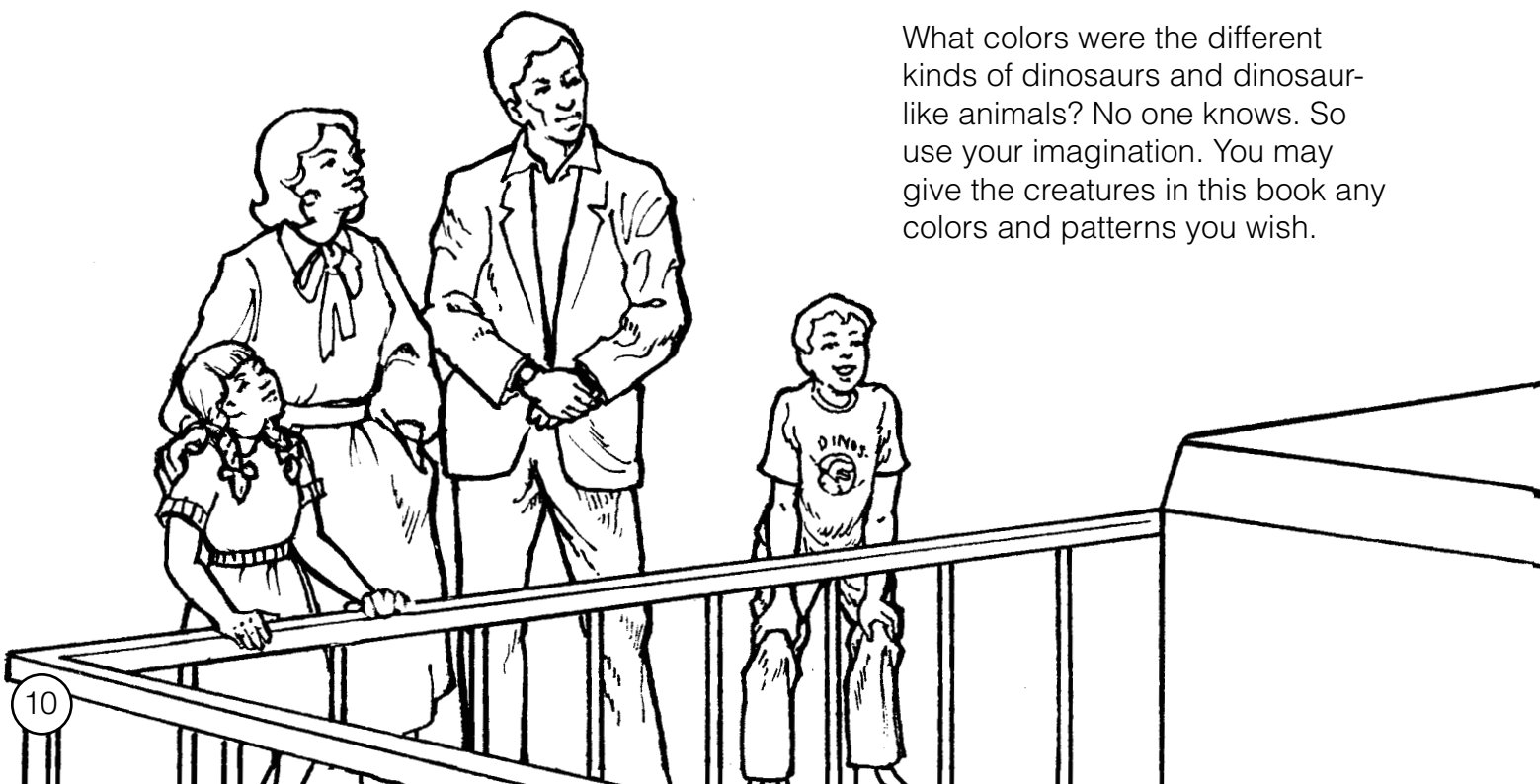
DINOSAUR FOSSILS RESTORATION PUZZLE

Be certain that all of the fossil puzzle pieces will fit together to reconstruct the complete dinosaur skeleton before pasting any of them down.

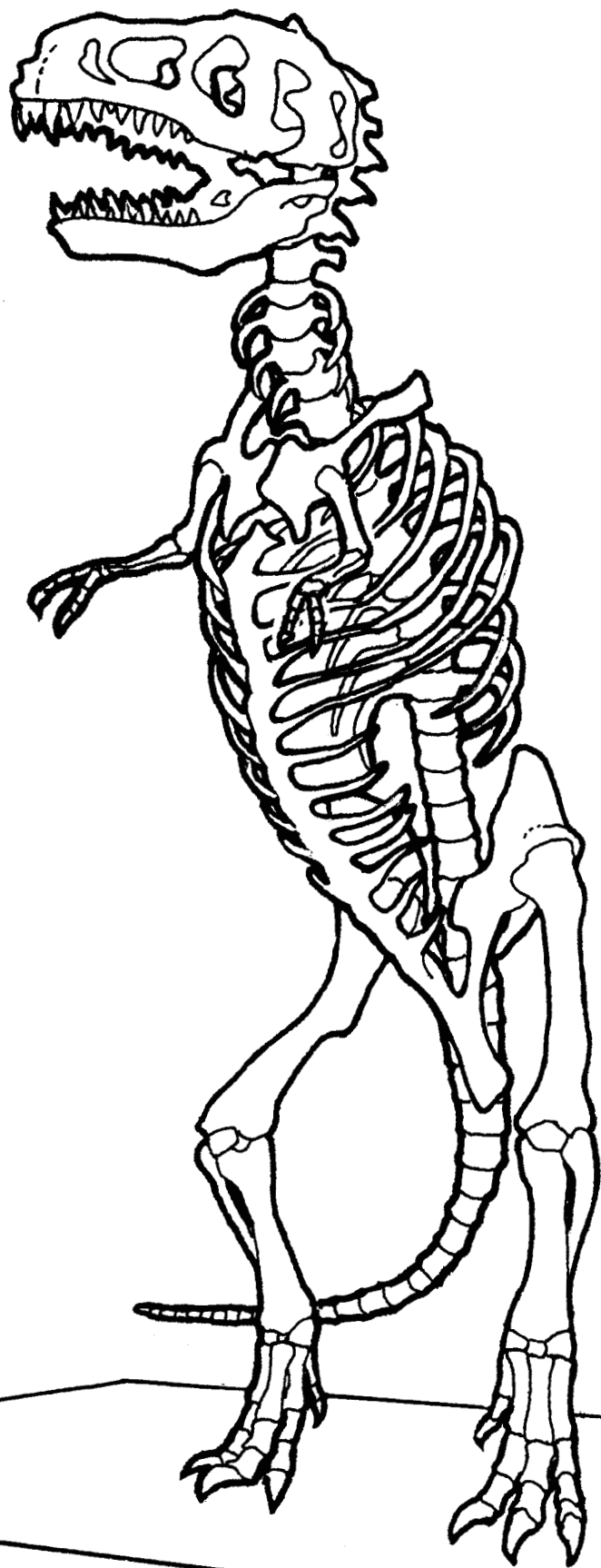




It's exciting to read about dinosaurs and to see displays of reconstructed dinosaurs in museums, but we must always keep in mind that much of what we read and see concerning dinosaurs is highly imaginative and very questionable. To better understand the problems scientists deal with when they try to reconstruct an animal from its fossils, let us suppose that elephants were extinct. If elephants were known only as fossils, there would be no record of the fleshy parts of their bodies, long trunks, and large ears. Reconstructing an elephant from its fossilized bones and tusks alone could not possibly give us a true picture of how it actually looked. An elephant might likely be pictured as the trunkless and tiny-eared creature shown on the above right — certainly not as we know an elephant to be! No matter how well intentioned scientists are in restoring dinosaurs from their fossilized remains, much of what they do comes from their imaginations.



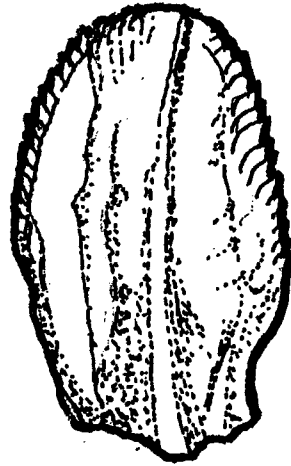
What colors were the different kinds of dinosaurs and dinosaur-like animals? No one knows. So use your imagination. You may give the creatures in this book any colors and patterns you wish.



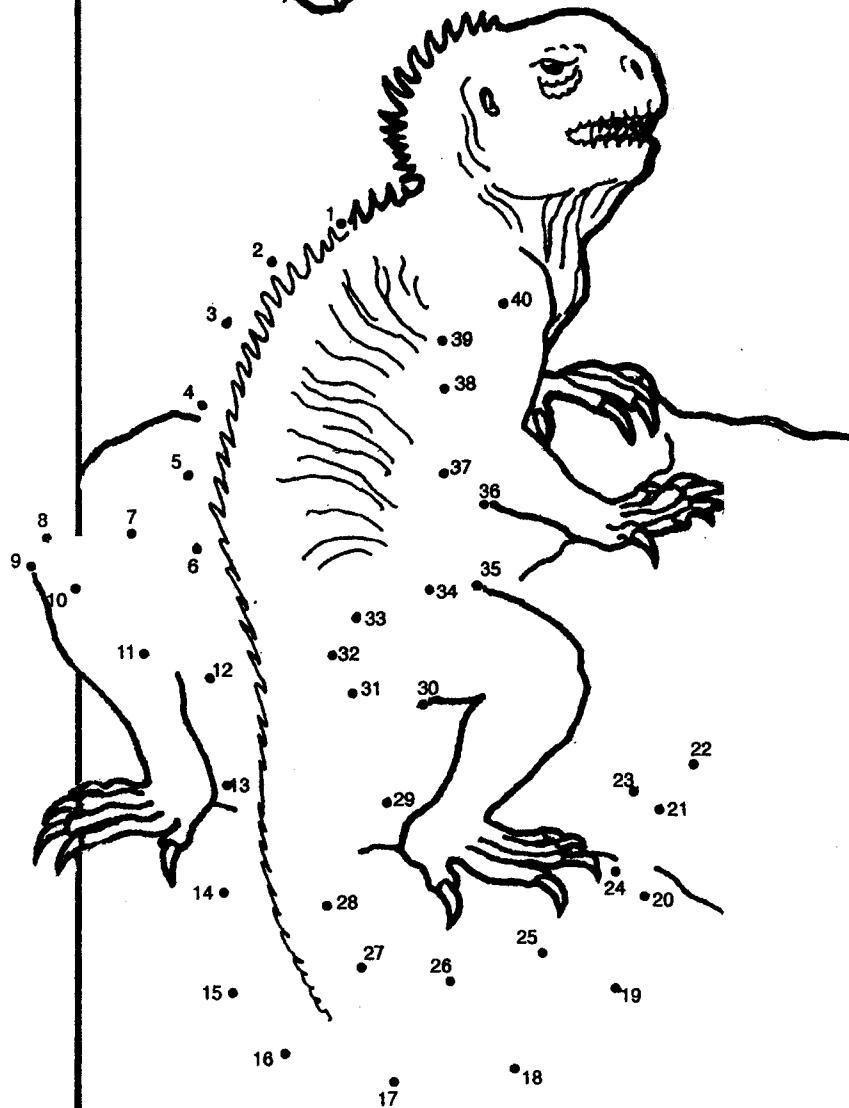
Scientists who study the bones of dinosaurs try to imagine what the creatures looked like and how they lived by considering the evidence available at the time. Such thinking shows in the names they give to newly discovered dinosaurs. The names, usually in the Greek or Latin languages, may say something about the discovery of the dinosaur (such as where it was found) or something the scientist thinks to be true about the creature. For example, the name *Tyrannosaurus rex* (pronounced tie-RAN-oh-SAWR-us rex) means “tyrant reptile king.” Today, however, some scientists believe *T-rex* was not at all the fierce hunter this name suggests, but a scavenger with weak little arms, eating carrion (animals already dead). Tomorrow, who knows what other scientists may imagine about *Tyrannosaurus*?

God never makes mistakes, and He is always right about everything. But scientists are human beings, and human beings do make mistakes and are often wrong. Time and time again, what scientists once believed to be true about dinosaurs has turned out to be wrong. The history of the study of dinosaur life is filled with one imaginative mistake after another.

Working together, scientists, preparators, and artists have made life-sized models of dinosaurs — using their imaginations to make them appear lifelike. Perhaps you have seen such models displayed in a museum. Fold over on the dotted line of this page to turn the *Tyrannosaurus rex* skeleton into a dinosaur model.



An Iguanodon Tooth



The iguana, a lizard of Mexico and South America

Draw a line following the numbered dots to complete the iguana.

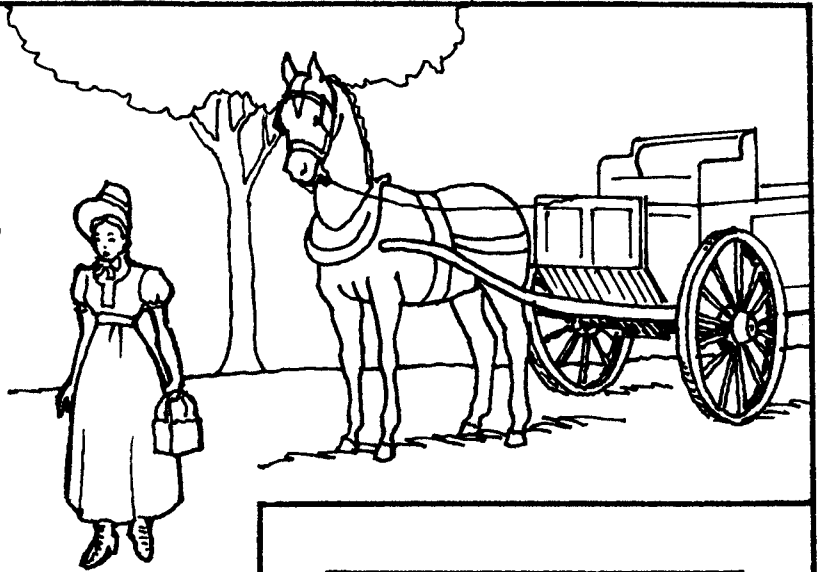
Fossil Discoveries and Imaginative Mistakes

"I think you have found the remains of an animal new to science," medical doctor Gideon Mantell said to his wife Mary when he looked at the large fossil tooth she had discovered. The Mantells, who lived near Oxford, England, shared an interest in searching for fossils. The year was 1822, and Dr. Mantell realized the tooth and other teeth and fossil bones they found nearby were unlike anything he had seen before. Baron Georges Cuvier, a famous French scientist and expert on fossils, upon looking at the remains mistakenly thought the teeth were from an ancient rhinoceros and the bones from an extinct hippopotamus. Then Dr. Mantell showed the fossil teeth to the naturalist Samuel Stutchbury who declared that while the fossil teeth were far larger, they were very much like the teeth of a living iguana. Realizing that these were fossils from an unknown, giant plant-eating creature that once lived on earth, Dr. Mantell gave it the name *Iguanodon*, meaning "iguana tooth."



IGUANODON TOOTH MAZE

On a spring day in 1822, Mary Mantell rode along in the horsedrawn carriage when her husband, Dr. Gideon Mantell, went to call on a patient. Waiting for him to return, she searched for fossils in roadside gravel and discovered the *Iguanodon* tooth. Help Mary Mantell find the tooth by drawing a line from START to FINISH through the maze.

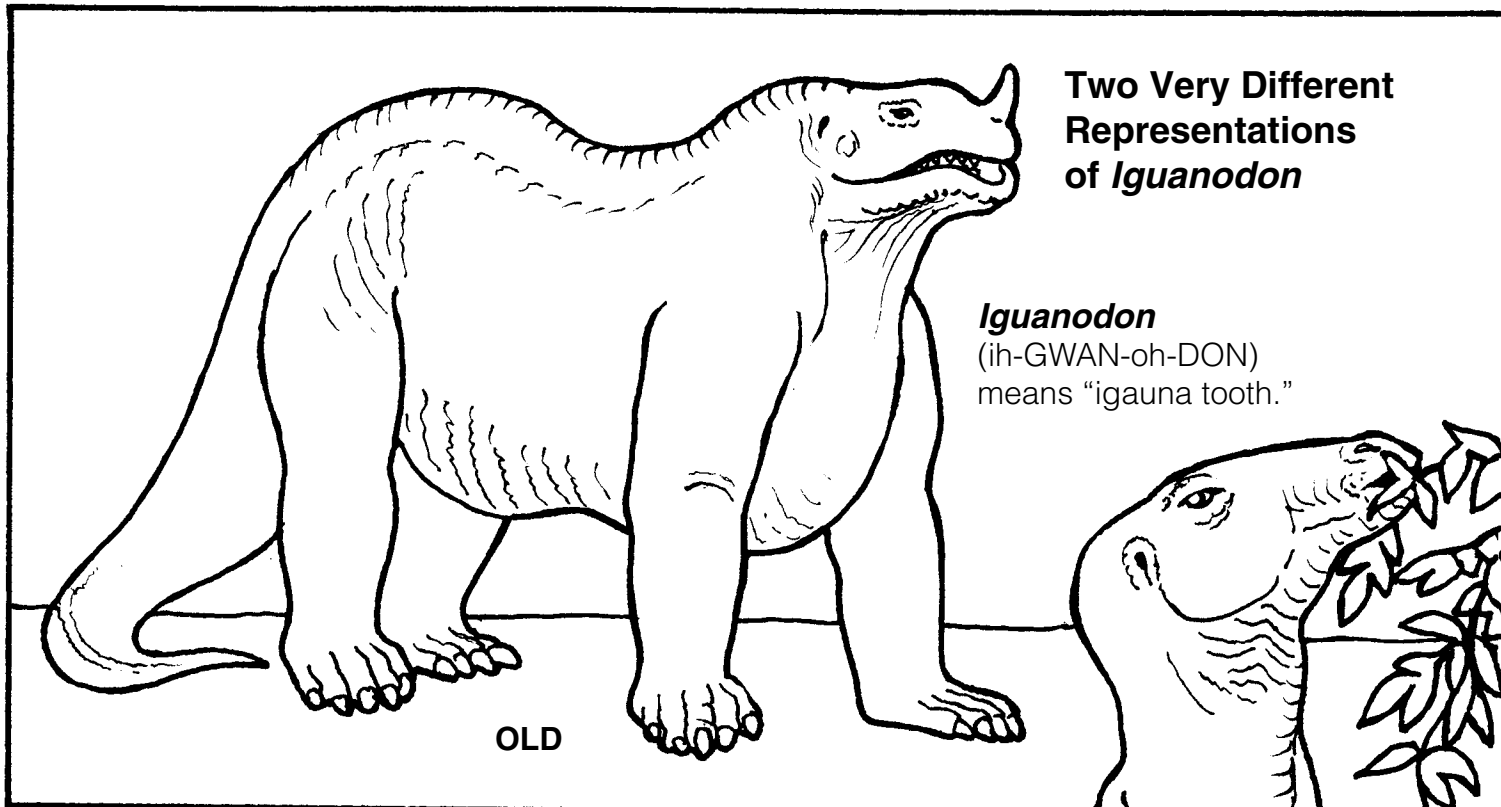


START

FINISH



Iguanodon
Tooth

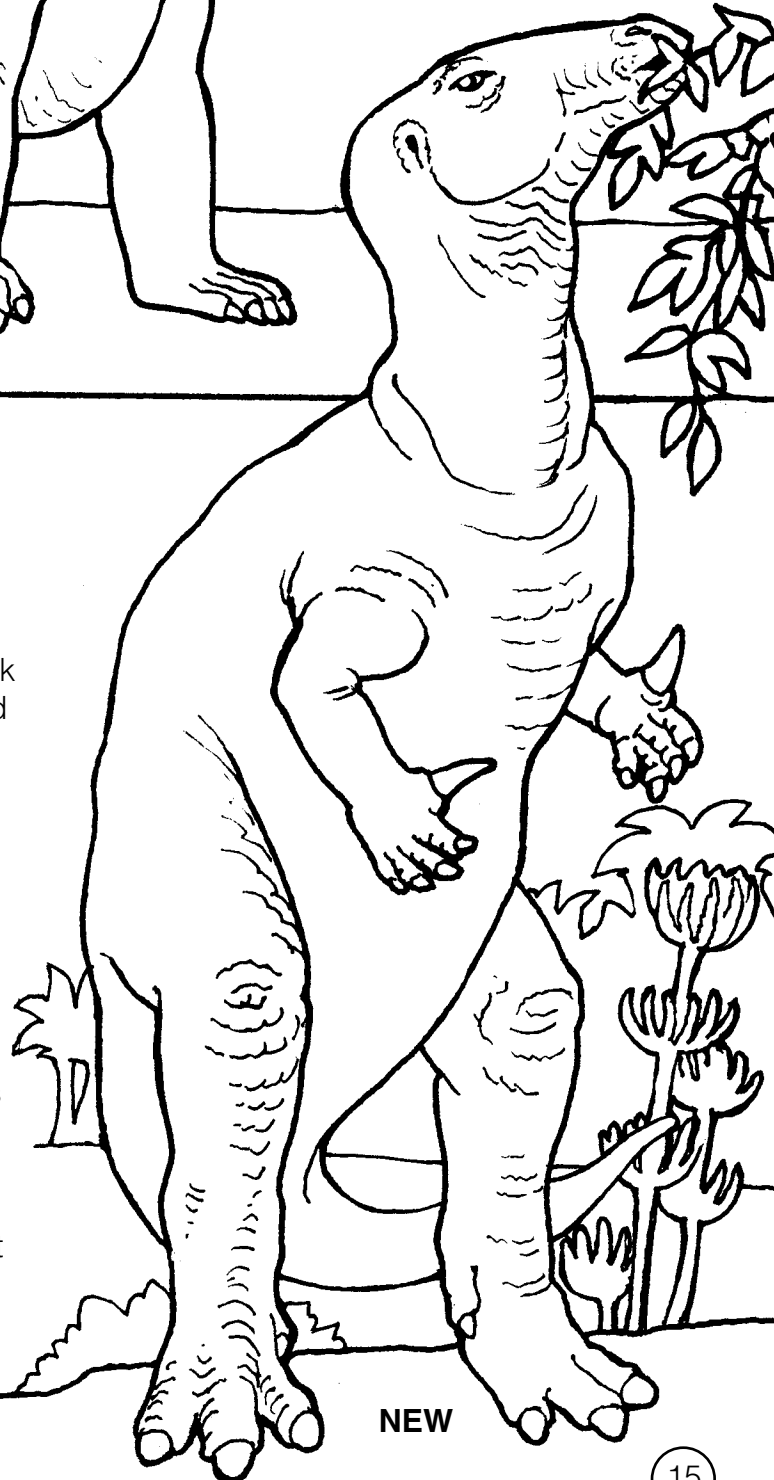


Two Very Different Representations of *Iguanodon*

Iguanodon
 (ih-GWAN-oh-DON)
 means "igauna tooth."

A very inaccurate model of *Iguanodon* (pictured above) was one of several life-sized restorations of dinosaurs produced in the early 1850s. Displayed in London, England, the models attracted enormous publicity and helped to spark the great interest in dinosaurs that has continued to our day.

Based on early scattered remains, this first reconstruction of *Iguanodon* contained many errors. *Iguanodon* was shown as a squat creature that walked on four legs and had a rhinoceros-like horn on its snout. A discovery in 1877 of a herd of 30 *Iguanodons* buried and piled together 1,000 feet underground in a Belgian coal mine (could this have happened as a result of the Great Flood?) helped give a more accurate picture of the dinosaur. *Iguanodon* is now known to have walked upright on two legs. The cone-shaped spike that was put on its snout was really a ten-inch-long thumb spike.



The “Dinosaur War” in America

No, the war wasn't between fighting dinosaurs. When the enthusiastic search for dinosaurs moved from Europe to the American West, the “dinosaur war” took place between two feuding paleontologists. They were Edward Cope, professor of paleontology at Yale University, and Othniel Marsh, professor of zoology (study of animals) at Haverford College. Each fought to be the first to discover and describe new dinosaur remains. Between 1877 and the late 1890s, teams of explorers hired by Cope and Marsh — driven by their fierce rivalry — unearthed about 130 new types of dinosaurs.



Othniel Marsh

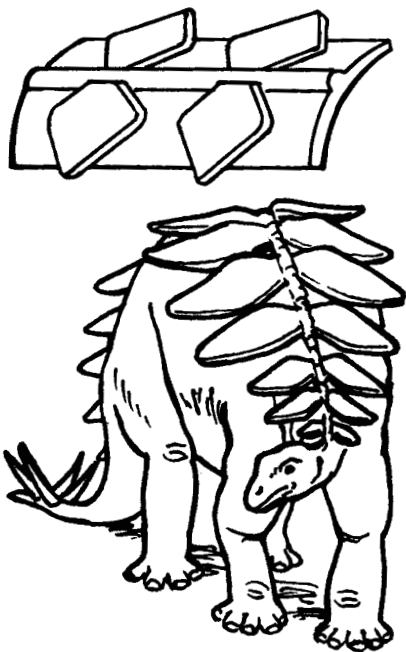


Edward Cope

Stegosaurus — Doubts and Disagreements!

Scientists just can't seem to agree about this dinosaur. *Stegosaurus*, meaning “roof reptile,” was given its name by Othniel Marsh. Marsh thought this name was quite appropriate, for he believed the dinosaur's diamond-shaped bony plates had lain flat on its back — like shingles on a roof. Now, most paleontologists doubt that. They think the plates stood upright, but they can't agree upon their arrangement. Some scientists have thought *Stegosaurus'* plates formed a protective shield for its back; others have disagreed. There is widespread belief today that their primary purpose was to act as heat exchangers to regulate *Stegosaurus'* body temperature. Scientists disagree on the pose of *Stegosaurus'* forelimbs. Some say *Stegosaurus* walked with its front legs in a bent position; others say *Stegosaurus* was straight-legged.

Were the plates flat on the back like roof shingles?



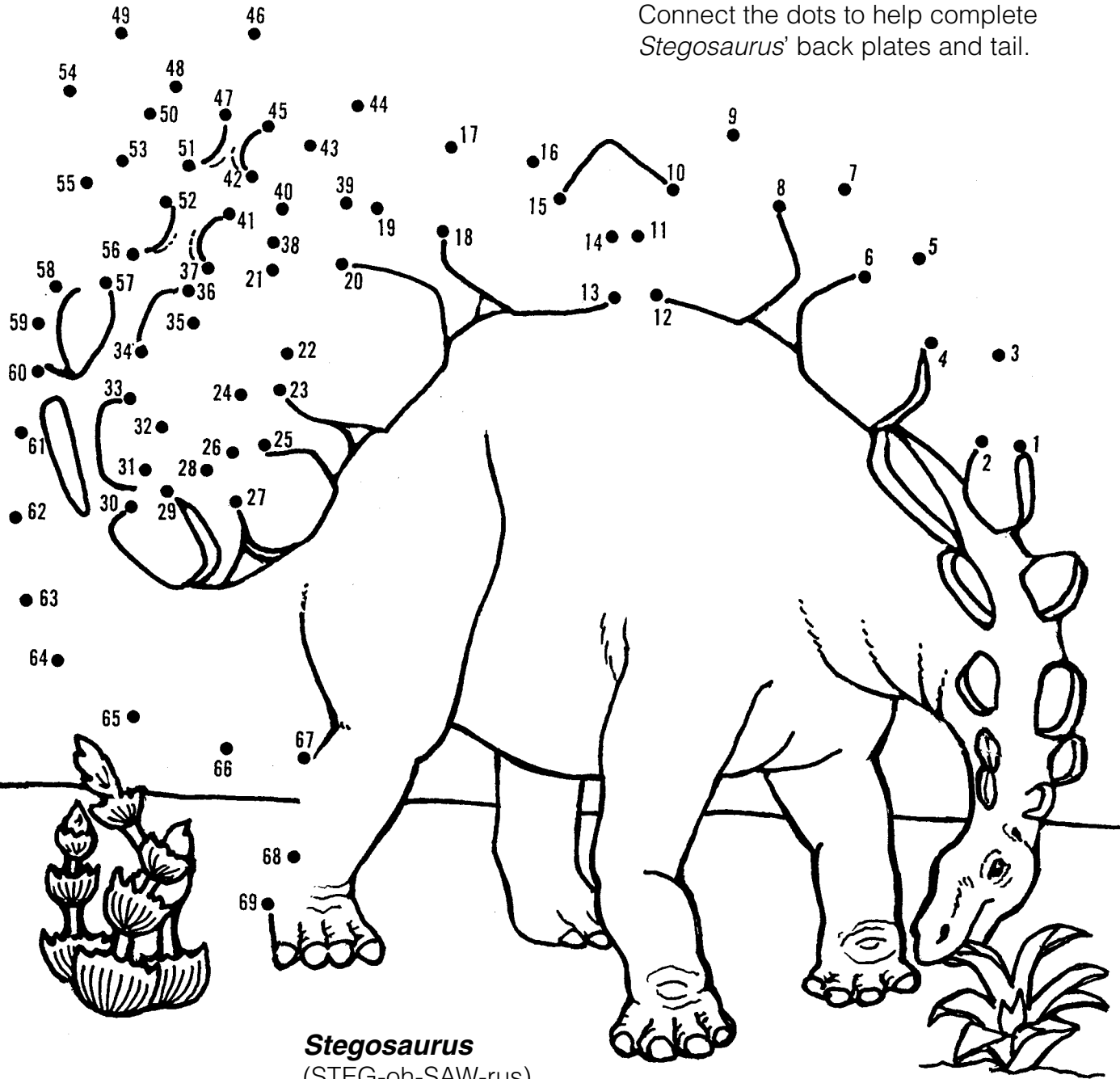
Were the plates paired in an upright position?



Were the plates upright and staggered alternately?



Connect the dots to help complete *Stegosaurus*' back plates and tail.



Stegosaurus
(STEG-oh-SAW-rus)
means "roof reptile."

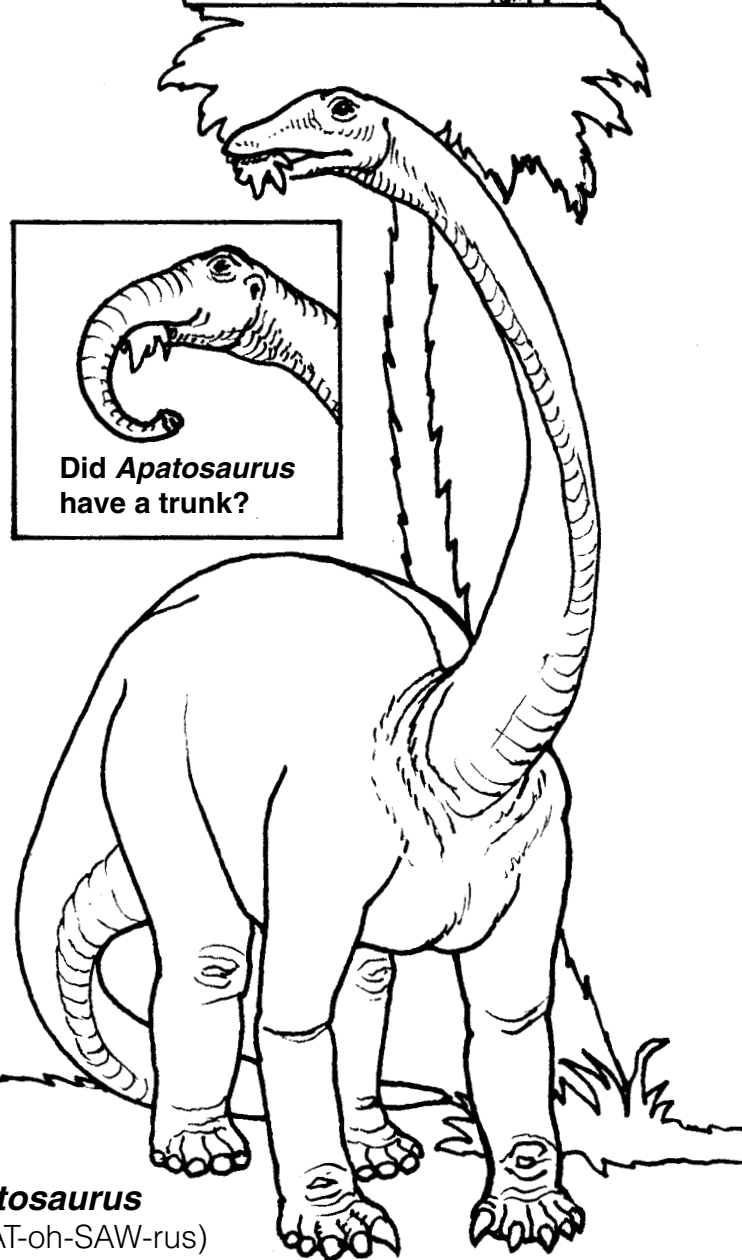
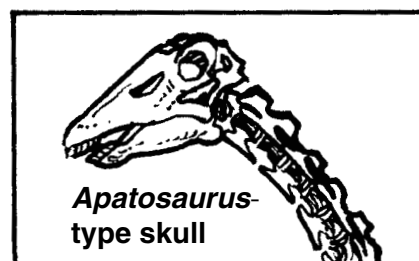
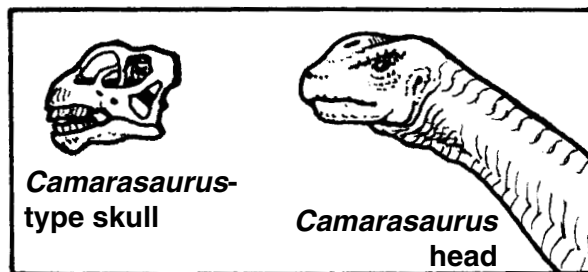
The largest of *Stegosaurus*' back plates stood a full 30 inches high. Close examination of the fossilized plates has shown they were not solid bone, but had hollow spaces like a honeycomb. A rich supply of blood could have filled these spaces. If *Stegosaurus* faced its backplates toward the early morning sun after a chilly night, blood flowing throughout the plates may have warmed quickly — helping the reptile to become active. Becoming too warm in the sun, *Stegosaurus* may have sought shade, and held its plates to a breeze to cool down. *Stegosaurus* had hind legs twice as long as its front legs, and God gave the plant-eater four three-foot-long spikes at its tail's end. Although it weighed two tons and grew up to 30 feet long, *Stegosaurus* had an unusually small skull that contained a brain only the size of a walnut.

The Dinosaur That Never Was!

Another dinosaur named by Othniel Marsh was *Apatosaurus*, meaning “deceptive reptile.” This name was particularly appropriate because of the confusion concerning its fossils. Marsh originally gave the name *Apatosaurus* to hip and backbone fossils found in 1877 at a dig in Colorado. Two years later a similar, but almost complete skeleton — missing its skull — was found in Wyoming. Marsh found a skull at a dig several miles away, put it with the body, and named the combination *Brontosaurus* (BRAHN-toe-SAW-rus), meaning “thunder reptile” — a dinosaur we now know never existed! In fact, the square-shaped skull Marsh put on *Apatosaurus*’ body was from *Camarasaurus* (KAM-a-ra-SAW-rus), meaning “chambered reptile,” a dinosaur named by his arch rival Edward Cope! For many years the deception surrounding *Brontosaurus* remained unknown, and this “dinosaur that never was” became famous worldwide.

Interestingly, it may be that the head shown in current illustrations of *Apatosaurus* (including the one on this page) is also wrong. The skull of *Apatosaurus* is unusual — for God placed its nostrils not at the end of its snout, but on top of its skull between the eyes. This same placement of the nostrils is found on elephants and tapirs, both of which have long, trunk-like noses. Did God also give *Apatosaurus* a flexible, lengthy nose?

Questions remain, but it is known from fossils that *Apatosaurus* grew to 76 feet in length, and probably weighed as much as 42 tons. *Apatosaurus*’ long skull had small peg-like teeth for snipping off plant food which it swallowed whole. Fossils reveal it also swallowed stones (called *gastroliths*), as alligators do today, to grind up food in its stomach.



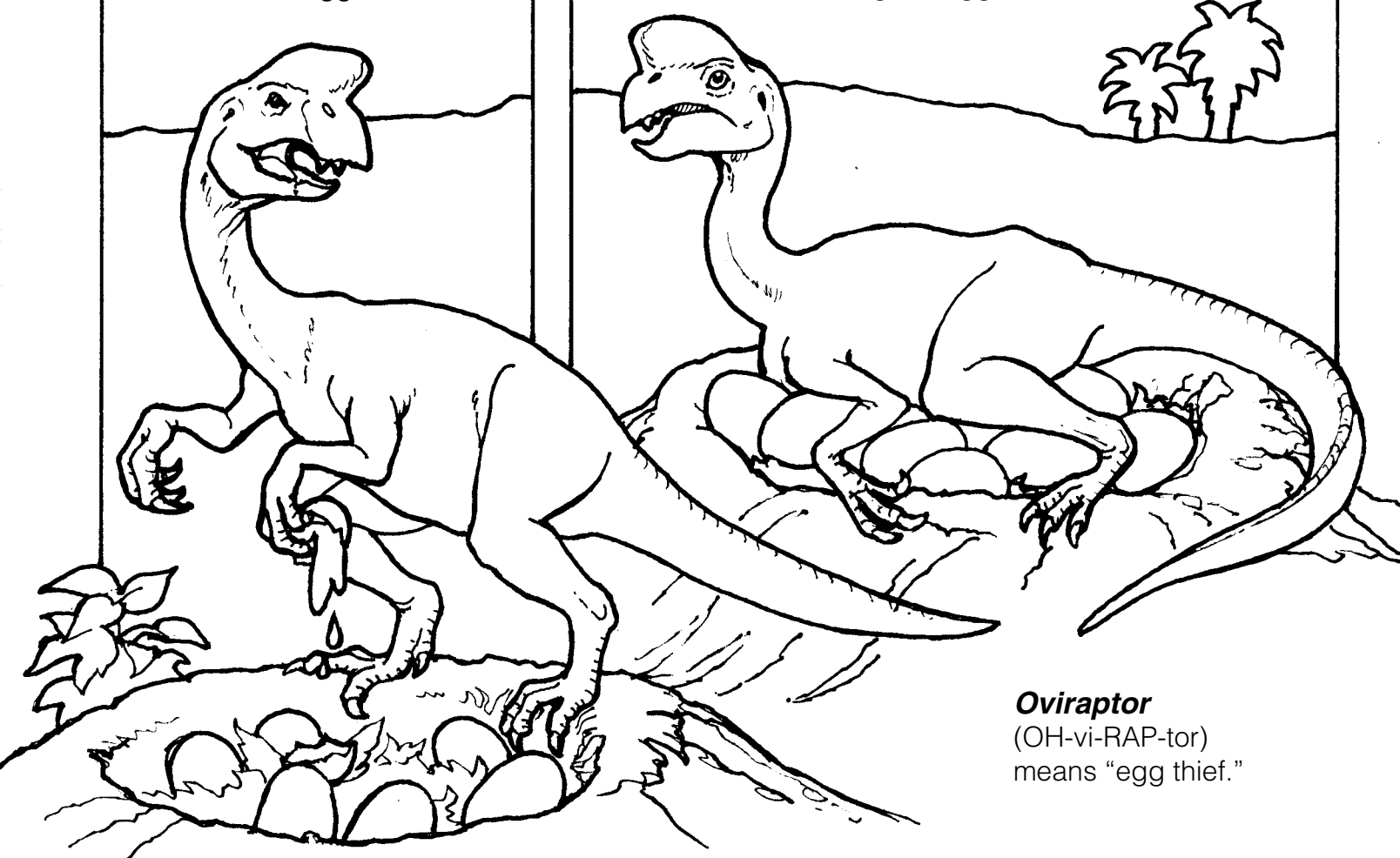
Apatosaurus
(a-PAT-oh-SAW-rus)
means “deceptive reptile.”

OLD VIEW

Oviraptor as
an egg thief

NEW VIEW

Oviraptor as a caring mother,
brooding the eggs in her nest



Oviraptor
(OH-vi-RAP-tor)
means “egg thief.”

***Oviraptor* — The Misunderstood Dinosaur**

Scientists can misinterpret and misunderstand fossil evidence. *Oviraptor*'s bones were first found in Mongolia in the early 1920s. Its remains were discovered in an area where the fossils of another dinosaur, *Protoceratops*, were abundant. *Oviraptor*'s fossils were found on top of a nest. It seemed that *Oviraptor* was in the act of eating the eggs of a *Protoceratops* when it was buried alive. (You will find out about the first discovery of dinosaur eggs later in this book.) *Oviraptor* was branded an “egg thief.” Convinced this was true, scientists wrote about how the two bony spikes on the roof of *Oviraptor*'s mouth were used to crack eggshells. Then, in 1993, a baby *Oviraptor* was found within one of the fossilized eggs that scientists thought had belonged to *Protoceratops*. It now appears that *Oviraptor* was not an “egg thief,” but had been nesting on its own eggs — close to where *Protoceratops* dinosaurs had their nests. What was once thought to be true is now considered false. This is another example of the everchanging views of scientists who write about dinosaurs. Only God's written Word, the Bible, never changes. God is never wrong about anything. God never misinterprets anything. God never misleads anyone. Holy Scripture tells us, “God is not a man, that he should lie” (Numbers 23:19).

FLIP-FLAP FOSSIL RECONSTRUCTION FUN

Help put the dinosaurs together the correct way.

Scientists have found beds of fossils where different kinds of dinosaurs appear to have been buried among each other under layers of earth laid down by rushing flood waters. Body parts were crushed, broken apart, mixed, and some were carried away. Covered by tons of earth, the scattered remains of the animals became fossils. The way in which these dinosaurs died and were buried together can make it very difficult to know which fossilized bones are part of the same animal.

The parts of the five dinosaurs on the following flip-flap pages are all mixed up. Cut along the dotted lines so you can flip the flaps back and forth to put the dinosaur parts together correctly. To help you properly match the flip-flap sections of each of the dinosaurs, its name can be found in the information on all three sections to the left of its pictured parts.

You also can have fun purposely mismatching dinosaur parts. How many new and different combinations of these five dinosaurs can you make? Cut through the two horizontal dotted lines on pages 21, 23, 25, and 27 all at the same time so the flip-flap sections will turn smoothly.

Alioramus (ah-lee-oh-RAH-muss), meaning “other branch,” was an unusual member of the tyrannosaurid (“tyrant reptile”) family of dinosaurs — the most famous of which is *Tyrannosaurus rex*. Unlike its typically deep-skulled, short-snouted “cousins,” *Alioramus* had a long, slim snout.

Lambeosaurus, from the size of a specimen found in California which appeared to have reached a length of 54 feet (16.5 m), is the largest of the duckbilled dinosaurs. *Lambeosaurus* had strong forelimbs and it likely walked on two legs to eat food from tall trees, and walked on all four legs to feast on low-growing vegetation.

Ornithomimus must have been a champion long-legged sprinter. It is estimated that *Ornithomimus* could have run at speeds up to 30 mph (50 kmph). It had slender, long-shinned legs and birdlike feet. *Ornithomimus*’ feet had three clawed toes that pointed forward and a tiny fourth toe that pointed backward. When *Ornithomimus* ran at great speeds, the forward thrust of its body would have been balanced by its extra-long, outstretched tail.

