

MYSTERY OF THE TERRIBLE HAND

- 1 Whose hand is this? Paleontologists have been **seeking** an answer for over 40 years. In the 1960s, paleontologists discovered a pair of giant arms in Ömnögovi, an area in southern Mongolia. The **length**
- 5 of each arm, when fully **extended**, was 2.4 meters (eight feet)! The claws were over 25 centimeters (ten inches) long. Paleontologists called the animal *Deinocheirus* (meaning “**terrible** hand”).

- So what did this animal look like? Paleontologists aren't sure. Scientists have **examined** the area many times. But since the original
- 10 discovery, they have **dug up** only a few other bones of this dinosaur.

dig dug dug

- Despite this, scientists have some ideas about *Deinocheirus*'s **appearance**. Physically, its arms and hands were similar to *ornithomimids*—a type of dinosaur that looked like a modern-day ostrich.¹ It probably used its arms for catching food. Paleontologists
- 15 used *Deinocheirus*'s arms to **estimate** its body size. The results were amazing. *Deinocheirus* was perhaps a huge animal—almost 12 meters (40 feet) long. This is almost as big as a *T. rex*!

- Other scientists have a different **opinion**. They think *Deinocheirus* was a smaller dinosaur with extremely long arms. But why would
- 20 a little animal need limbs² so long? To climb trees or to hunt for food, perhaps? “The body is a **mystery**,” says Thomas Holtz, a paleontologist at the University of Maryland in the U.S. “It might not be an *ornithomimid* at all. But then what is it?” Until paleontologists find new fossil evidence, they will continue to ask this question.

¹ An **ostrich** is a very large bird that cannot fly.

² Your **limbs** are your arms and legs.

Reading Comprehension

Multiple Choice. Choose the best answer for each question.

- | | |
|------------|--|
| Purpose | 1. What is the main purpose of the reading?
a. to explain how paleontologists find dinosaur fossils
b. to compare <i>T. rex</i> and <i>Deinocheirus</i>
c. to talk about different dinosaur discoveries in Mongolia
d. to describe an unusual type of dinosaur |
| Detail | 2. Which of these can we definitely say about <i>Deinocheirus</i> ?
a. Its body was the same size as that of <i>T. Rex</i> .
b. Scientists believe its body was very small but with very long arms.
c. Its body was the same size as that of an ostrich.
d. Scientists are still trying to find out the size of its body. |
| Paraphrase | 3. In lines 9–10, it says, <i>But since the original discovery, they have dug up only a few other bones of this dinosaur.</i> What does this mean?
a. Only a few bones were found in the original discovery.
b. The dinosaur found in the original discovery didn't have many bones.
c. They haven't found very many bones since the original discovery.
d. They have found no new bones since the original discovery. |
| Reference | 4. What does <i>this</i> refer to in line 17?
a. <i>Deinocheirus</i> ' leg bone
b. a modern-day ostrich
c. the length of <i>Deinocheirus</i> ' arm
d. <i>Deinocheirus</i> ' body size |
| Main Idea | 5. The main idea of the third paragraph is that <i>Deinocheirus</i> _____.
a. may have had a very large body
b. was a very small dinosaur
c. was probably not an <i>ornithomimid</i>
d. probably lived in tall trees |
| Vocabulary | 6. What does the word <i>evidence</i> mean in line 24?
a. information
b. questions
c. mysteries
d. beliefs |
| Inference | 7. Which statement would Thomas Holtz probably agree with?
a. <i>Deinocheirus</i> was an <i>ornithomimid</i> .
b. Scientists have a clear idea of what <i>Deinocheirus</i> looked like.
c. <i>Deinocheirus</i> was probably larger than <i>T. rex</i> .
d. There is still a lot we don't know about <i>Deinocheirus</i> . |



Did You Know?

Also known as "Elvisaurus," *Cryolophosaurus* had a head crest that was similar to Elvis Presley's 1950s haircut.



Reading Skill

Using Definitions to Find Meaning

You will often find new words and phrases in a text. Some of these may be defined in the text. Certain words signal a definition, for example, *is*, *means*, *refers to*, and *is called*. Definitions can also be set off by certain punctuation: dashes —, parentheses (), commas , , or quotation marks " ". These may also signal extra information about people or places in the text.

For example: *Dinosaurs, which means "terrible lizards," lived millions of years ago. Ostriches, large flightless birds, live in Africa. Nessie is physically similar to a type of plesiosaur—a sea reptile with a very long neck.*

A. Completion. Complete these sentences with definitions from the box (a–d).

- | | |
|-----------------------------------|---|
| a. <u>an animal with two feet</u> | b. the world's most complete <i>T. rex</i> skeleton |
| c. the length of time it lived | d. "tyrant lizard" |

1. *Tyrannosaurus* means _____ in Greek. *Rex* means "king" in Latin.
2. *T. rex* was a biped, which refers to _____. Its arms were very small.
3. Based on fossils, a *T. rex*'s lifespan—_____—was about 30 years.
4. *Tyrannosaurus Sue*, _____, was found by fossil hunter Sue Hendrickson in 1990.

B. Scanning for Meaning. Use definitions in the reading on page 101 to answer these questions.

1. What is Ömnögovi?

2. What does the name *Deinocheirus* mean?

3. What were ornithomimids?

Critical Thinking Discuss with a partner. *Deinocheirus* was discovered in Mongolia. Where do you think future dinosaur discoveries will be made? Why?

Vocabulary Practice

A. Words in Context. Complete each sentence with the correct answer.

1. If you **examine** something, you _____.
a. look at it quickly b. study it closely
2. A **mystery** is something you _____ explain.
a. can b. cannot
3. An example of an **opinion** is _____.
a. "Dinosaurs were reptiles." b. "Dinosaurs are very interesting."
4. If something is **terrible**, it makes you feel _____.
a. bad or afraid b. happy or relaxed
5. You **dig up** something that is _____ the surface.
a. above b. below

B. Completion. Complete the information using the correct form of words from the box. One word is extra.

appearance estimate examine extend length seek

The largest ever flying animal lived 85 million years ago. It was a type of pterosaur (or "flying reptile") called *Quetzalcoatlus*. When this animal's wings were 1. _____, each was about 12 meters (40 feet). That is the 2. _____ of some airplanes! But did pterosaurs come from a smaller animal? And how did pterosaurs learn to fly? For years, paleontologists have been 3. _____ answers to these questions.

Recently, one of the smallest pterosaurs was discovered in China by a team of Chinese and Brazilian paleontologists. In 4. _____, the tiny pterosaur (called *N. crypticus*) was a small, toothless reptile with feet similar to those of a bird. Scientists 5. _____ that *N. crypticus* lived about 120 million years ago.

✓ *Quetzalcoatlus* was the largest animal ever to fly.



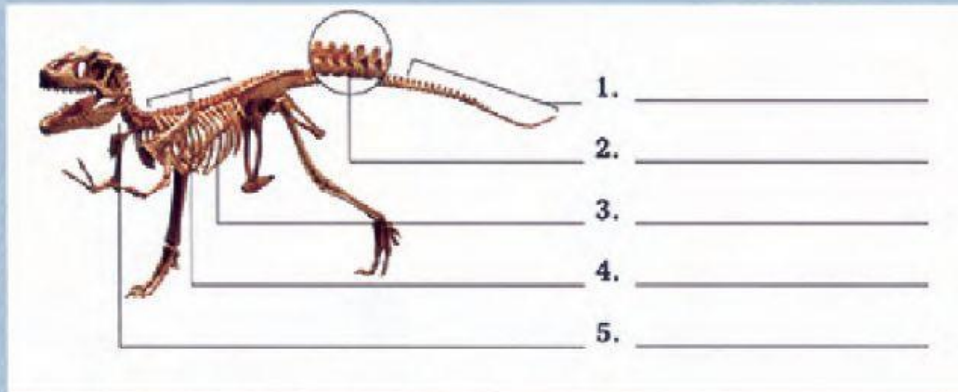
Word Partnership Use **opinion** with:
(adj.) **different** opinion, **expert** opinion,
honest opinion, **popular** opinion; (v.) **ask** an
opinion, **give** an opinion, **share** an opinion.

VIEWING Dinosaur Discovery

Before You Watch

- A. Labeling.** Label the picture using the words in the box. One word is extra.
Use a dictionary to help you.

backbone neck rib tail skull vertebrae



- B. Predict.** Look at the video title, the map, and the picture and words in **A**. What do you think the video will be about?
- a. a new dinosaur fossil that has been found
 - b. new research on what dinosaurs ate
 - c. how to identify dinosaur bones



While You Watch

- A. True or False?** Read the statements below. As you watch the video, circle whether they are **T** (true) or **F** (false).

- | | | |
|---|----------|----------|
| 1. The area where the bones were found used to be a desert. | T | F |
| 2. Juan Pablo Garcia found the Sabinasaurio bones by accident. | T | F |
| 3. This is the first time that fossils have been found in the area. | T | F |
| 4. Local people hope that more dinosaur lovers will visit their region. | T | F |

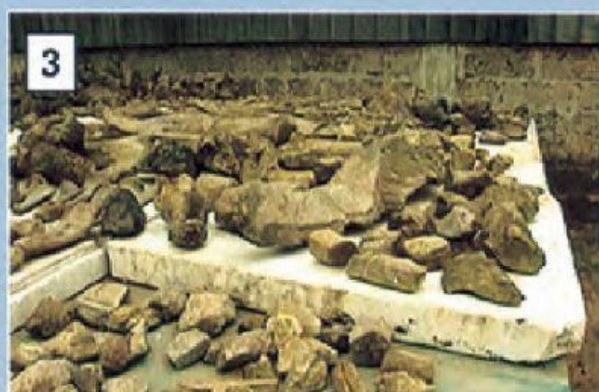
B. Matching. Check (✓) the caption that correctly describes each picture.



- ☐ Jose Gonzalez talks about who found the dinosaur fossils.
- ☐ Jose Gonzalez describes the dinosaur's size.



- ☐ Daniel Guajardo Ortega asks someone if he has found a fossil.
- ☐ Daniel Guajardo Ortega sells his fossil discovery to a scientist.



- ☐ This could be the most complete dinosaur skeleton found in Latin America.
- ☐ Scientists are not sure how to put the dinosaur together.



- ☐ Too many people are now visiting the city.
- ☐ Local people say the dinosaur discovery has changed their city.

After You Watch

Critical Thinking. Discuss these questions in a group.

1. How do you think the discovery has changed the city of Sabinas?
2. What do you think should happen to the dinosaur bones found in Sabinas?
3. What would you do if you found a fossil?