

A Spectacular Find: Scene 1

Dr. Li Wong sat back in the dirt, his eyes wide with disbelief, and yelled, “Dr. Chen, come over here and see this, you’re not going to believe what I’ve found!”

Dr. Jin-Mai Chen got up from her field desk and walked across the site towards where Dr. Wong had been carefully brushing away dirt for the last two hours. She and Dr. Wong were paleontologists from the University of Beijing, and had been excavating this site in the Chongqing Province for more than a month. They were both hoping to find some dinosaurs, since there had been some interesting finds in the area before. She had to walk carefully as she crossed the site, because they had built a grid system out of string throughout the site in order to map the areas that they were excavating. Finally, she got over to where Dr. Wong sat. She crouched down and looked at where Dr. Wong had been brushing away the dirt.

Her eyes widened in surprise and she gasped, saying “Dr. Wong, is that what I think it is?”

Dr. Wong nodded and said, “It’s a Sauropod, probably a *Mamenxi*, and very well preserved. But there’s more. Do you see what’s right over there?” He pointed to an object that was in an excavation square roughly twenty feet away. Dr. Chen walked over to the object and stopped in her tracks.

She looked back at Dr. Wong and said, “This is a *Homo sapiens*! It would have to be from the Late Pleistocene or Early Recent period, judging by the stone tools that are lying next to it. These are two major finds! I’m going to go email the university and tell everyone!”

A Spectacular Find: Scene 2

A reporter called out, “Dr. Chen, is it true that you and Dr. Wong have discovered a human body near a dinosaur fossil in Chongqing Province?”

Another reporter yelled, “Does this mean that humans and dinosaurs coexisted?”

Yet another reporter asked, “Does this refute all of the earlier theories about when dinosaurs and humans lived on the earth?”

Dr. Wong and Dr. Chen looked at each other and sighed. Ever since the University of Beijing had announced their finds, the two paleontologists had become like celebrities. Reporters were everywhere, asking them all sorts of questions, while the newspapers and magazines were full of stories about the dinosaur and human found so close together.

Dr. Chen spoke up so that everyone could hear her, and said, “Dr. Wong and I will be presenting our findings on a CNN network special in a few days. There, we will answer all of your questions and more. Until then, we will be analyzing the data that we gathered, including radiocarbon dates, potassium argon dates, stratigraphic maps and our maps of the site so we can be prepared for our CNN appearance. Thank you.”

Dr. Wong leaned over and whispered in her ear, “We’ve got a lot of work to do. We should get back to the paleontology lab right away!”

A Spectacular Find: Scene 2 Handout



Department of Paleontology, University of Beijing
RADIOISOTOPE DATING RESULTS

LOCATION: Chongqing Province

RESEARCHERS: Li Wong, Jin-Mai Chen

DATE ANALYZED: October 5, 2005

SPECIMEN ANALYZED: Bone fragments from *Homo sapiens*

COMMON NAME: Modern human

DATING TECHNIQUE USED: Radiocarbon (^{14}C)

RESULTS: Specimen dated to $29,000 \pm 375$ years ago

SPECIMEN ANALYZED: Fossil fragments from *Mamenchisaurus constructus*

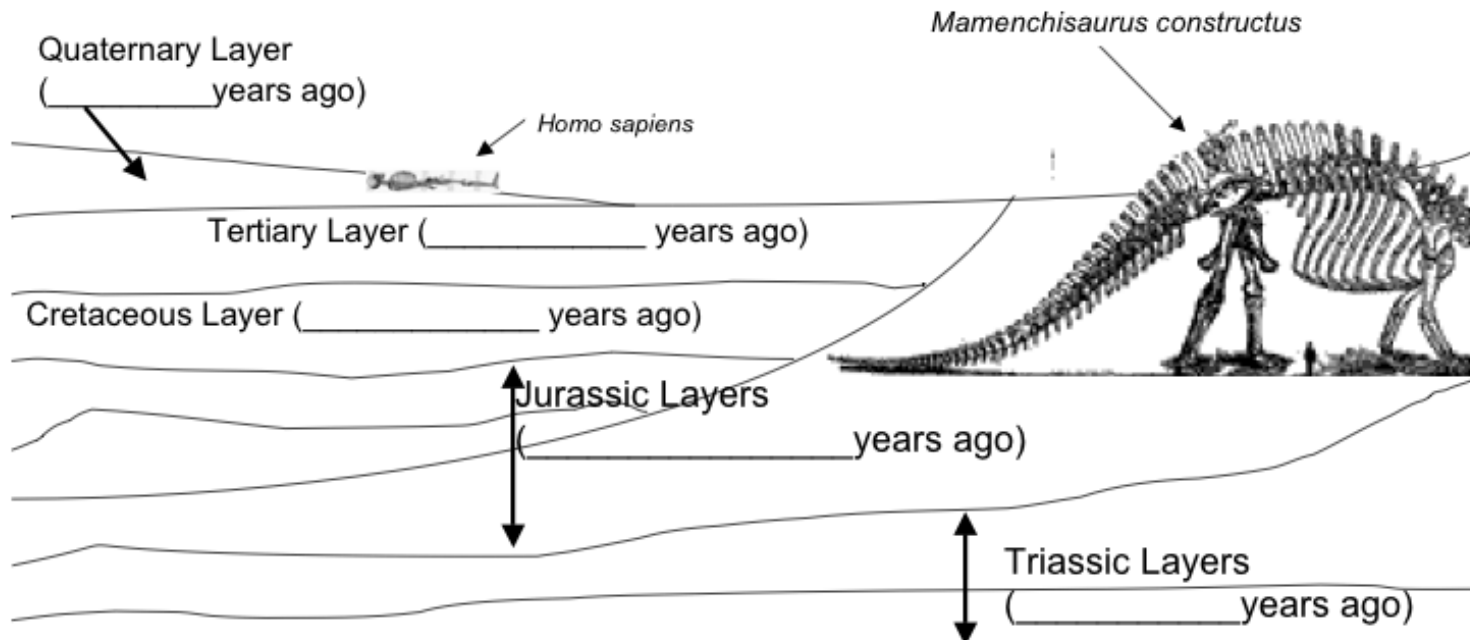
COMMON NAME: Mamexi Sauropod dinosaur

DATING TECHNIQUE USED: Potassium-Argon ($^{40}\text{K}/^{40}\text{Ar}$)

RESULTS: Specimen dated to 188 million \pm $400,000$ years ago

A Spectacular Find: Scene 2 Handout

Stratigraphic Map: The Chongqing Site



A Spectacular Find: Assignment

Create an informative poster that summarizes and presents “the doctors” findings. Use your research and the sources that you found in this case to successfully argue against the idea the humans and dinosaurs coexisted. You should include in your poster:

1. Your interpretations of the handouts from Scene 2 (radioisotope laboratory and stratigraphic map).
2. Any data or information from the Scene 2 handouts that supports the case
3. Written summaries of when dinosaurs vs. humans first evolved
4. When dinosaurs went extinct
5. Describe the different rock types in the strata at the site
6. Discuss how two layers from vastly different time periods could both be represented at the surface

Be sure to properly cite all of the sources that you use in your poster, including any non-original pictures and graphics. Be creative and have fun!!!

Self-Evaluation Worksheet

Date: _____

Your Name: _____ Group #: _____

Instructions: Please circle the response with which you agree the most. This evaluation will only be read by your teacher and will **not** be shown to other students.

1. How would you rate *your* participation in group discussion and group work?

5 Excellent 4 Very Good 3 Good 2 Fair 1 Poor

2. How would you rate *your* effort in completing the case?

5 Excellent 4 Very Good 3 Good 2 Fair 1 Poor

3. Did *you* complete the assigned homework? **Yes No**

If No, explain why:

4. How well did *you* work with everyone in your group?

5 Excellent 4 Very Good 3 Good 2 Fair 1 Poor

5. Overall, how would you rate *your* performance in this case?

5 Excellent 4 Very Good 3 Good 2 Fair 1 Poor

6. What praise or criticism do you have for other group members? What are your thoughts about the case?

A Spectacular Find: Box Chart

<p><u>Facts</u> (What we know right now)</p>	<p><u>Questions</u> (Based on current knowledge)</p>
<p><u>Hypotheses</u> (Based on facts and questions)</p>	<p><u>Learning Issues</u> (What we need to learn)</p>