



Chinese Fossils Unlock Secrets of Early Bird Evolution

Description

Paleontologists found fossils of two ancient bird species in Zhenghe County, Fujian province, China. These fossils are 149 million years old. They show important bird features that appeared early in their history. This discovery suggests that birds may have started to appear earlier than we thought.

One bird, named *Baminornis zhenghensis*, is the oldest known short-tailed bird. It has a short tail with a bone called the pygostyle, which is found in modern birds. Until now, the earliest short-tailed bird was thought to be from the Early Cretaceous period. This new finding pushes back that date by nearly 20 million years.

The second bird is not named yet. It is identified by a single fossilized wishbone, called a furcula. Researchers believe this furcula is related to a group of Cretaceous birds called Ornithuromorpha.

This research was published in the journal *Nature* by Professor Min Wang and his team from the Institute of Vertebrate Paleontology and Paleoanthropology.

Vocabulary List:

1. **Paleontologists** /ˌpeɪ.lɪ.ən'tɒl.ə.dʒɪsts/ (noun): Scientists who study fossils and the history of life on Earth.
2. **Fossils** /'fɒs.ɪl/ (noun): Preserved remains or traces of ancient organisms.
3. **Cretaceous** /krɪ'teɪ.ʃəs/ (adjective): Relating to the last period of the Mesozoic era known for the dominance of dinosaurs.
4. **Identification** /aɪ,dentɪfɪ'keɪʃən/ (noun): The action or process of identifying someone or something.
5. **Furcula** /'fɜːr.kjʊ.lə/ (noun): A forked structure in birds commonly known as the wishbone.
6. **Discovery** /dɪs'kʌv.ə.ri/ (noun): The act of finding or learning something for the first time.

Comprehension Questions

Multiple Choice

1. Where were the fossils of two ancient bird species found?
Option: Zhenghe County, Fujian province, China
Option: Beijing, China



Option: New York, USA

Option: London, UK

2. How old are the fossils of the ancient bird species?

Option: 100 million years old

Option: 120 million years old

Option: 149 million years old

Option: 200 million years old

3. What bone is present in the oldest known short-tailed bird?

Option: Scapula

Option: Femur

Option: Pygostyle

Option: Clavicle

4. Which group of Cretaceous birds is the furcula believed to be related to?

Option: Ornithuromorpha

Option: Tyrannosauridae

Option: Hadrosauridae

Option: Ankylosauria

5. Who published the research on the ancient bird species?

Option: Professor Min Wang

Option: Dr. Sarah Lee

Option: Dr. John Smith

Option: Professor Emily Davis

6. Which journal published the research on the ancient bird species?

Option: Nature

Option: Science

Option: Cell

Option: Journal of Paleontology

True-False

7. The discovery of the ancient bird fossils suggests that birds may have appeared later than previously thought.



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8. The oldest known short-tailed bird was previously believed to be from the Late Cretaceous period.
9. The second bird species found in Zhenghe County, Fujian province, China, is named Baminornis zhenghensis.
10. The furcula is a bone found in the wishbone of birds.
11. The furcula found in the second bird fossil is related to a group of Cretaceous birds called Troodontidae.
12. The Institute of Vertebrate Paleontology and Paleoanthropology is located in Beijing, China.

Gap-Fill

13. The fossils found in Zhenghe County, Fujian province, China, are _____ million years old.
14. The pygostyle is a bone found in the _____ of Baminornis zhenghensis.
15. The second bird species identified by a fossilized furcula is related to the group of Cretaceous birds called _____.
16. Professor Min Wang and his team published their research in the journal _____.
17. The discovery of these ancient bird species challenges the previous understanding of when birds started to _____.
18. The furcula found in the second bird fossil is believed to be from a species closely related to the _____.

Answer

Multiple Choice: 1. Zhenghe County, Fujian province, China 2. 149 million years old 3. Pygostyle 4. Ornithuromorpha 5. Professor Min Wang 6. Nature

True-False: 7. False 8. False 9. False 10. True 11. False 12. True

Gap-Fill: 13. 149 14. tail 15. Ornithuromorpha 16. Nature 17. appear 18. modern birds



Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)

1. Who are scientists that study fossils?
Option: A. Geologists
Option: B. Biologists
Option: C. Paleontologists
Option: D. Chemists
2. Which term relates to something that exists in a digital or online environment?
Option: A. Real
Option: B. Virtual
Option: C. Physical
Option: D. Material
3. Which gas is a potent greenhouse gas and is often associated with cattle farming?
Option: A. Oxygen
Option: B. Nitrogen
Option: C. Methane
Option: D. Carbon Dioxide
4. Who are individuals who deceive others for personal gain?
Option: A. Inventors
Option: B. Scammers
Option: C. Researchers
Option: D. Entrepreneurs
5. What term describes the increase in the average temperature of the Earth's surface?
Option: A. Cooling
Option: B. Melting
Option: C. Warming
Option: D. Freezing
6. What term refers to the general direction in which something is developing or changing?
Option: A. Standstill
Option: B. Decline
Option: C. Trend
Option: D. Stagnation
7. What do we call measures taken to ensure safety and protection from harm?



- Option: A. Insecurity
- Option: B. Protection
- Option: C. Safety
- Option: D. Security

8. Who are participants in a game or sport?

- Option: A. Spectators
- Option: B. Referees
- Option: C. Players
- Option: D. Coaches

9. What term refers to the range of possibilities from which one or more may be selected?

- Option: A. Decisions
- Option: B. Options
- Option: C. Directions
- Option: D. Choices

10. What term is used to describe finding something that was previously unknown?

- Option: A. Revelation
- Option: B. Invention
- Option: C. Creation
- Option: D. Discovery

Gap-Fill (Fill in the blanks with the correct word from the vocabulary list.)

11. The term _____ refers to the wishbone found in birds used in making predictions or decisions by many people.

12. Smartphones laptops and tablets are examples of electronic _____ .

13. The new policy had a significant _____ on the company's profits.

14. Strong _____ often inspire and guide their teams towards success.

15. The use of plastic bags was _____ in an effort to protect the environment.

16. Reducing carbon _____ is crucial in combating climate change.

17. Efforts to _____ relations between the two countries were welcomed by the



international community.

18. The new software update will be _____ for download next week.
19. The team prepared a _____ surprise for their coach to show their appreciation.
20. The artist received a _____ for a mural in the city park.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)

21. It is essential to the hard work and dedication of the employees.
22. A video can be created using artificial intelligence to manipulate appearances.
23. The university offers a wide range of programs for students to pursue their chosen field of .
24. The authenticity of the information depends on the credibility of the .
25. The film director used a creative technique to convey the character's emotions.
26. The of a new species of dinosaur excited the scientific community.
27. The economic downturn had a severe on job opportunities in the region.
28. Great can motivate others to achieve common goals.
29. Online users should be cautious of potential trying to steal personal information.
30. In a reality environment users can interact with simulated worlds.

Answer

Multiple Choice: 1. C. Paleontologists 2. B. Virtual 3. C. Methane 4. B. Scammers 5. C. Warming 6. C. Trend 7. D. Security 8. C. Players 9. D. Choices 10. D. Discovery

Gap-Fill: 11. Furcula 12. Devices 13. Impact 14. Leaders 15. Banned 16. Emissions 17. Normalize 18. Available 19. Special 20. Commission

Matching sentence: 1. Acknowledge 2. Deepfake 3. Study 4. Source 5. Montage 6. Discovery 7. Impact 8. Leaders 9. Scammers 10. Virtual

CATEGORY

1. Sci/Tech - LEVEL1



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