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## Unearthed Pterosaur Fossils Capture Soaring Evolution

### Description

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Smaller pterosaurs may have flapped their wings while larger ones soared

Terry Whitlatch

Recent discoveries in Jordan suggest a new perspective on the flight capabilities of prehistoric pterosaurs, revealing surprising similarities to modern avian flight mechanics. These ancient giants, which predated birds and bats by 80 million years, exhibited varying flight behaviors based on their size, as evidenced by their bone structures.

Dr. Jeffrey Wilson Mantilla of the University of Michigan, leading the research, compares the preserved fossils of two pterosaur species to shed light on their flight strategies. Despite the typically fragile nature of pterosaur bones, advanced imaging techniques unveiled distinct internal features that differentiated the flight styles of these creatures.

Notably, the larger *Arambourgiania philadelphiae* exhibited internal ridges reminiscent of modern soaring birds, suggesting a preference for gliding, while the smaller *Inabtanin alarabia* displayed criss-crossed struts indicative of flapping flight. Dr. Wilson Mantilla posits that these structural differences were adaptations to specific flight demands.

The implications of these findings extend beyond individual species, hinting at a diverse range of aerial behaviors among pterosaurs. Further exploration of global fossil records may unveil additional clues to the evolutionary strategies of these ancient flyers, providing insights into the complexities of aerial locomotion in prehistoric skies.

Topics:

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## Vocabulary List:

1. **Pterosaur** /'terə,sɔr/ (noun): An extinct flying reptile of the clade Pterosauria known to have existed during the age of the dinosaurs.
2. **Capabilities** /,keɪpə'bɪlɪtɪz/ (noun): The qualities or features that enable someone or something to perform a task.
3. **Exhibited** /ɪg'zɪbɪtɪd/ (verb): Displayed or showed something publicly.
4. **Adaptations** /,ædæp'teɪʃənz/ (noun): Changes or adjustments made to function more effectively in a particular environment.
5. **Implications** /,ɪmplɪ'keɪʃənz/ (noun): The possible results or effects of an action or a decision.
6. **Locomotion** /,ləʊkə'moʊʃən/ (noun): The ability to move from one place to another.

## Comprehension Questions

## Multiple Choice

1. Who led the research on the flight capabilities of prehistoric pterosaurs in Jordan?

- Option: Dr. Jeffrey Wilson Mantilla
- Option: Dr. Terryl Whitlatch
- Option: Dr. Arambourgiania Philadelphiae
- Option: Dr. Inabtanin Alarabia

2. What is the name of the larger pterosaur species mentioned in the text?

- Option: Arambourgiania philadelphiae
- Option: Inabtanin alarabia
- Option: Jeffreyus mantilla
- Option: Whitlatchia jordanensis

3. Which pterosaur species exhibited internal ridges resembling modern soaring birds?

- Option: Arambourgiania philadelphiae
- Option: Inabtanin alarabia
- Option: Jeffrey Wilson Mantilla
- Option: Terryl Whitlatch

4. What flight behavior did the smaller pterosaur species likely engage in?

- Option: Flapping flight
- Option: Gliding flight
- Option: Soaring flight
- Option: Hovering flight

5. According to the text, how do the bone structures of pterosaurs provide insights into their flight behaviors?

- Option: By displaying distinct internal features
- Option: By having external markings
- Option: By emitting sounds during flight
- Option: By changing colors in flight

6. What do the findings regarding ancient pterosaurs hint at?

- Option: A diverse range of aerial behaviors
- Option: Strict uniformity in flight styles
- Option: Lack of adaptability in flight strategies
- Option: Limited flight capabilities



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## Answer

**Multiple Choice:** 1. Dr. Jeffrey Wilson Mantilla 2. Arambourgiania philadelphiae 4. Flapping flight 5. By displaying distinct internal features 6. A diverse range of aerial behaviors

## Vocabulary quizzes

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

1. What is the process by which two atomic nuclei combine to form a heavier nucleus?

- Option: Fusion
- Option: Pellet
- Option: Degrade
- Option: Locomotion

2. Which prehistoric reptile had wingspans of up to 33 feet?

- Option: Implications
- Option: Pterosaur
- Option: Moderation
- Option: Detection

3. Which term is used to describe something that is forbidden by law rules or custom?

- Option: Accountable
- Option: Anticipated
- Option: Illicit
- Option: Revamp

4. Which word is used to describe things related to the sky or outer space?

- Option: Speculation
- Option: Mesmerized
- Option: Celestial
- Option: Prevailing

5. What is false or inaccurate information especially that which is deliberately intended to deceive?

- Option: Flagship
- Option: Misinformation
- Option: Complicity
- Option: Revamp

6. Which term means to give something a new and improved version?

- Option: Adaptations
- Option: Complicity
- Option: Revamp
- Option: Detection

7. Which term refers to the power or ability to do something?

- Option: Implications
- Option: Capabilities
- Option: Anticipated
- Option: Fusion

8. What is prolonged public disagreement or heated discussion often about a political or social issue?

- Option: Locomotion
- Option: Pellet
- Option: Controversy
- Option: Spectacle

9. What term is used to describe something that fills a person with awe or amazement?

- Option: Awe-inspiring
- Option: Pellet
- Option: Degrade
- Option: Detection

10. Which word describes things that are related to mysticism or spiritual practices?

- Option: Mystical
- Option: Anticipated
- Option: Detection
- Option: Fusion

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

11. The \_\_\_\_\_ of the rocket engines signaled the start of the space mission.

12. Prisoners are kept in \_\_\_\_\_ as part of their punishment.

13. The stock market is often influenced by investor \_\_\_\_\_ about future performance.

14. The long-\_\_\_\_\_ rainfall brought relief to the drought-stricken region.

15. The new luxury store is the company's \_\_\_\_\_ location showcasing their best

products.

16. The security system was designed to provide early \_\_\_\_\_ of any unauthorized access.

17. The criminal was charged with \_\_\_\_\_ in the theft ring.

18. The rising temperatures are putting many species at risk of \_\_\_\_\_.

19. Animals develop various \_\_\_\_\_ to survive in their changing environments.

20. It is important to eat in \_\_\_\_\_ and maintain a balanced diet for good health.

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

21. The nuclear generates power through controlled nuclear reactions.

22. The new law has wide-reaching for businesses and consumers alike.

23. The artist her latest paintings at the gallery opening last night.

24. The early of the virus outbreak helped contain the spread.

25. The audience was by the magician's unbelievable illusions.

26. The moon the path through the dark forest for the travelers.

27. The fireworks display was a dazzling in the night sky.

28. The owl regurgitated a small of undigested bones and fur.

29. Plants have developed various to thrive in different climates.

30. Despite the storm the ship reached its destination with the winds guiding it.

## Answer

**Multiple Choice:** 1. Fusion 2. Pterosaur 3. Illicit 4. Celestial 5. Misinformation 6. Revamp 7. Capabilities 8. Controversy 9. Awe-inspiring 10. Mystical

**Gap-Fill:** 11. Ignition 12. Confinement 13. Speculation 14. Anticipated 15. Flagship 16. Detections 17. Complicity



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18. Extinction 19. Adaptations 20. Moderation

**Matching sentence:** 1. Reactor 2. Implications 3. Exhibited 4. Detection 5. Mesmerized 6. Illuminated  
7. Spectacle 8. Pellet 9. Adaptations 10. Prevailing

## CATEGORY

1. Sci/Tech - LEVEL5

### Date Created

2024/09/08

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