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# Lizard's Lifesaver: Air Jacket Extends Underwater Stay

## Description

Some lizards have a unique way of staying underwater for longer periods by blowing out and then breathing back in bubbles of air. This behavior was first observed in Costa Rica in 2015 by Lindsey Swierk from Binghamton University in New York State. She noticed a type of lizard called *Anolis aquaticus* diving into streams and staying submerged for extended periods.

Further research revealed that at least 18 species of *Anolis* lizards exhibit this bubble rebreathing behavior underwater, allowing them to stay submerged for up to 18 minutes. These lizards have water-repellent skin that retains a layer of air underwater, giving them a shiny appearance. By blowing out and re-inhaling bubbles, they can access more oxygen and potentially remove carbon dioxide.

In a recent study, Swierk applied a moisturizer to the lizards' skin to temporarily disrupt their water-repellent properties. The results showed that lizards with plain water on their skin could stay underwater 32% longer than those with the moisturizer.

This unique behavior is believed to help the lizards extract more oxygen from the air bubbles they rebreathe. The bubbles may act as a makeshift scuba tank, allowing them to survive underwater for extended periods.

Other animals, like the star-nosed mole and water shrew, also exhibit similar bubble rebreathing behavior underwater, but for different purposes.

Topics: Underwater Behavior of Lizards, Bubble Rebreathing, Oxygen Extraction

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## Vocabulary List:

1. **Submerged** /səb'mɜːrdʒd/ (adjective): Completely covered or hidden under a liquid.
2. **Behavior** /bɪ'heɪvjər/ (noun): The way in which an animal or person acts in response to a particular situation.
3. **Oxygen** /'ɒksɪdʒən/ (noun): A chemical element essential for life commonly found in the air.
4. **Repellent** /rɪ'pelənt/ (adjective): Having the ability to repel or resist moisture or other substances.
5. **Extract** /ɪk'strækt/ (verb): To remove or obtain something from a source.
6. **Scuba** /'sku:bə/ (noun): A system for staying underwater that uses a tank of air.

## Comprehension Questions

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## Multiple Choice

1. Where was the unique underwater behavior of lizards first observed?

- Option: Costa Rica
- Option: Australia
- Option: Mexico
- Option: Brazil

2. How many species of *Anolis* lizards have been found to exhibit bubble rebreathing behavior underwater?

- Option: 9
- Option: 12
- Option: 18
- Option: 25

3. What was the purpose of applying moisturizer to the lizards' skin in the recent study?

- Option: To enhance their speed underwater
- Option: To test the impact on their bubble rebreathing behavior
- Option: To evaluate their camouflage abilities
- Option: To measure their diving depth

4. How long can the *Anolis* lizards stay submerged underwater due to their bubble rebreathing behavior?

- Option: Up to 10 minutes
- Option: Up to 15 minutes
- Option: Up to 18 minutes
- Option: Up to 20 minutes

5. What is the believed purpose of the bubbles in aiding the lizards' survival underwater?

- Option: To regulate their body temperature
- Option: To serve as a makeshift scuba tank
- Option: To communicate with other underwater creatures
- Option: To help them navigate underwater

6. Which other animals exhibit similar bubble rebreathing behavior underwater as mentioned in the text?

- Option: Dolphins and whales
- Option: Star-nosed mole and water shrew
- Option: Turtles and crocodiles
- Option: Pelicans and seagulls



## Answer

**Multiple Choice:** 1. Costa Rica 2. 18 3. To test the impact on their bubble rebreathing behavior 4. Up to 18 minutes 5. To serve as a makeshift scuba tank 6. Star-nosed mole and water shrew

## Vocabulary quizzes

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

1. Which term refers to a journey undertaken for a specific purpose?  
Option: Expedition  
Option: Analysis  
Option: Desperate  
Option: Survivor
2. What word describes the ability to be passed from one person to another?  
Option: Variant  
Option: Transmissible  
Option: Prevalent  
Option: Effectiveness
3. Which term means to give special importance or prominence to something?  
Option: Combining  
Option: Emphasized  
Option: Symptoms  
Option: Assistance
4. What refers to suggestions or advice on what should be done?  
Option: Itinerary  
Option: Recommendations  
Option: Tailored  
Option: Revolutionizing
5. Which term describes being influenced or harmed by something?  
Option: Affected  
Option: Variant  
Option: Submerged  
Option: Behavior



6. What is the term for a period when a service is not available or operational?

- Option: Outage
- Option: Disruption
- Option: Verify
- Option: Submerged

7. Which term relates to the study of genes and heredity?

- Option: Genetic
- Option: Survivor
- Option: Desperate
- Option: Expedition

8. What term refers to measures taken to protect against potential harm or damage?

- Option: Continuity
- Option: Safeguards
- Option: Affected
- Option: Variant

9. Which term refers to physical or mental features that indicate a condition exists?

- Option: Tailored
- Option: Revolutionizing
- Option: Symptoms
- Option: Assistance

10. What gas is essential for most living organisms?

- Option: Repellent
- Option: Extract
- Option: Scuba
- Option: Oxygen

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

11. \_\_\_\_\_ different ingredients can lead to unexpected flavors and textures.

12. Technology is constantly \_\_\_\_\_ the way we live and work.

13. The new invention has the potential to \_\_\_\_\_ the industry.

14. Have you planned the complete \_\_\_\_\_ for the trip?

15. Do you need any \_\_\_\_\_ with your project?



16. The company offers \_\_\_\_\_ solutions to meet individual needs.
17. The ancient city remains \_\_\_\_\_ under the sea.
18. Please \_\_\_\_\_ the accuracy of the data before proceeding.
19. In some regions malaria is \_\_\_\_\_ during the rainy season.
20. The sudden power \_\_\_\_\_ caused chaos in the city.

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

21. The _____ of the plane crash was found after days in the wilderness.
22. The new _____ of the virus is more contagious than the original strain.
23. The disease is highly _____ through close contact with infected individuals.
24. The insect effectively keeps mosquitoes away.
25. The detailed _____ revealed interesting patterns in the data.
26. The code determines many of our inherited traits.
27. The team tested the _____ of the new treatment on a small sample.
28. The scientific _____ aimed to discover rare plant species in the rainforest.
29. The committee made several _____ for improving workplace safety.
30. The child's disruptive _____ improved after counseling sessions.

## Answer

**Multiple Choice:** 1. Expedition 2. Transmissible 3. Emphasized 4. Recommendations 5. Affected 6. Outage  
7. Genetic 8. Safeguards 9. Symptoms 10. Oxygen

**Gap-Fill:** 11. Combining 12. Revolutionizing 13. Revolutionize 14. Itinerary 15. Assistance 16. Tailored  
17. Submerged 18. Verify 19. Prevalent 20. Disruption

**Matching sentence:** 1. Survivor 2. Variant 3. Transmissible 4. Repellent 5. Analysis 6. Genetic 7. Effectiveness  
8. Expedition 9. Recommendations 10. Behavior



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## CATEGORY

1. Sci/Tech - LEVEL3

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